



April 24, 2017

Ms. Monica Morales  
Acting Director  
USEPA, Region VIII (8P-AR)  
1595 Wynkoop St.  
Denver, Colorado 80202-1129

Dear Ms. Morales:

To fulfill the applicable requirements of 40 Code of Federal Regulations (CFR) 50.14; 40 CFR Part 50, Appendix K; and 40 CFR Part 50, Appendix N, Montana hereby submits:

- (1) flagged  $PM_{2.5}$  monitoring data for calendar years 2015 and 2016;
- (2) flagged  $PM_{10}$  monitoring data for calendar years 2015 and 2016; and
- (3) flagged data exclusion demonstrations for calendar years 2015 and 2016.

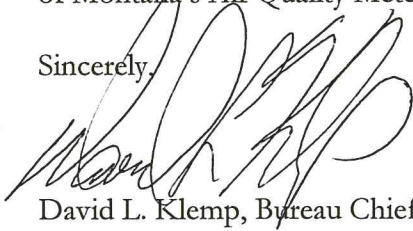
This submittal contains one hardcopy and one electronic copy. The enclosed documents contain information regarding  $PM_{2.5}$  and  $PM_{10}$  ambient air data "flagged" in EPA's AQS database to indicate values affected by smoke from wildfires. Inclusion of flagged data in the computation of average ambient pollutant concentrations could result in inappropriate estimates for determining attainment status, and other air quality planning activities. These documents were approved by the Department of Environmental Quality (Department) following the required public notice and comment period. This submittal also contains the Department's demonstration and proof of public notice.

It should be noted, that flagged  $PM_{2.5}$  and  $PM_{10}$  data representing exceptional events included with this submission is only for data that shows an exceedance or violation of a NAAQS, per §50.14(a)(i). The 24-hour NAAQS standard for  $PM_{2.5}$  is 35 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Values above this standard that were impacted by wildfires have been flagged. Although the  $PM_{10}$  24-hour NAAQS standard is 150  $\mu\text{g}/\text{m}^3$ , values above 98  $\mu\text{g}/\text{m}^3$  were flagged to support future plans to re-designate  $PM_{10}$  nonattainment areas with Limited Maintenance Plans. Please note that Montana also has  $PM_{2.5}$  data below the 24-hour NAAQS standard with documented influence from wildfires. Montana reserves the right to submit additional exceptional events documentation in the future if the  $PM_{2.5}$  annual design value is significantly impacted by these events.

Ms. Monica Morale  
USEPA, Region VIII (8P-AR)  
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If you have any questions concerning the contents of this submittal, please direct them to the state of Montana's Air Quality Meteorologist, Kristen Martin, at [KMartin@mt.gov](mailto:KMartin@mt.gov) or (406) 444-0283.

Sincerely,

A handwritten signature in black ink, appearing to read 'David L. Klemp', is written over the word 'Sincerely,'.

David L. Klemp, Bureau Chief  
Air Quality Bureau  
(406) 444-0286  
(406) 444-1499 – fax  
[DKlemp@mt.gov](mailto:DKlemp@mt.gov)

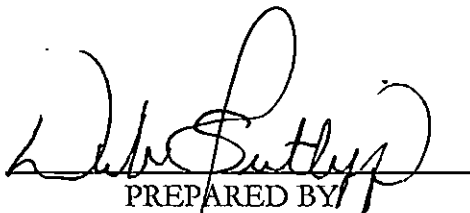
Enclosures

RECORD  
REGULATORY ACTION FOR EXCEPTIONAL EVENTS

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PREPARED BY

## PUBLIC NOTICE

- 1) The Department of Environmental Quality is inviting public comment on the submission of an administrative request to the US Environmental Protection Agency (EPA) to exclude certain ambient air monitoring data from regulatory review.
- 2) Certain PM<sub>2.5</sub> and PM<sub>10</sub> ambient air monitoring data from 2015 and 2016 were flagged for exclusion because their values were unduly affected (i.e. increased) due to the smoke from wildfires in 2015 and 2016. The "Flagged Data" documents contain information regarding the monitoring data "flagged" for exclusion. The "Historical Graphs" documents compare those "flagged" days to daily historical averages. After review, EPA may exclude the flagged data for purposes of air quality planning and regulation.
- 3) The Department will accept public comment regarding the submission for 30 days. The public comment period begins on March 9, 2017 and ends on April 8, 2017 at 5:00 p.m.
- 4) Interested persons may view the 2015 and 2016 Exception Events Request Package on the Department's website at: <http://deq.mt.gov/public/publiccomment> or may call the Department at 406-444-3490 to have a copy made available for their inspection.
- 5) The State of Montana makes reasonable accommodations for any known disability that may interfere with a person's ability to participate in state government proceedings. Persons requiring accommodation need to contact Kristi Ponozzo concerning the nature of the accommodation. Please contact Kristi at P.O. Box 200901, Helena, Montana 59620-0901; phone 406-444-2813; fax 406-444-1499; or email [KPonozzo@mt.gov](mailto:KPonozzo@mt.gov).
- 6) Interested parties may submit their comments concerning the proposal described above in writing to the Department by
  - addressing them to Kristen Martin, 1520 E. Sixth Avenue, P.O. Box 200901, Helena, Montana, 59620-0901;
  - faxing them to (406) 444-1499; or
  - sending them via email addressed to "KMartin@mt.gov."To be guaranteed consideration, written comments must be postmarked on or before 5:00 p.m., April 8, 2017.



## CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing documents (public comment on the submission of an administrative request to the US Environmental Protection Agency (EPA) to exclude certain ambient air monitoring data from regulatory review) were distributed electronically via Microsoft Lyris to the ATTACHED Interested Parties List on

March 1, 2017

  
\_\_\_\_\_  
DEB SUTLIFF

3-1-17  
DATE

2015 and 2016 EXCEPTION EVENT  
INTERESTED PARTIES

MemberID	Domain	Email Address	Status
744090	ccny.cuny.edu	yhwu@ccny.cuny.edu	Successful Send
802867	torpey.org	work@torpey.org	Successful Send
432156	cdm.com	woodwardjj@cdm.com	Successful Send
286681	pplweb.com	wlneumiller@pplweb.com	Successful Send
739460	hotmail.com	wjbowden3@hotmail.com	Successful Send
296816	flathead.mt.gov	wjacobs@flathead.mt.gov	Successful Send
478397	northwestern.com	william.thompson@northwestern.com	Successful Send
373398	ci.billings.mt.us	walkers@ci.billings.mt.us	Successful Send
835342	wcgrp.com	walexander@wcgrp.com	Successful Send
811913	gmail.com	vickmt3@gmail.com	Successful Send
802734	yahoo.com	Valleyviewlawns@yahoo.com	Successful Send
362895	barr.com	twidboom@barr.com	Successful Send
731044	townpump.com	trentb@townpump.com	Successful Send
739316	gmail.com	tracie.e.norman@gmail.com	Successful Send
362056	blackfoot.net	townofalberton@blackfoot.net	Successful Send
463251	cordite.com	todg@cordite.com	Successful Send
797321	gmail.com	todaystheeday@gmail.com	Successful Send
373409	stillwatermining.com	tkircher@stillwatermining.com	Successful Send
773621	montanamining.org	tjohnson@montanamining.org	Successful Send
726364	gmail.com	tjlkmd@gmail.com	Successful Send
406247	yahoo.com	tiphlmiller@yahoo.com	Successful Send
777796	aecom.com	thomas.damiana@aecom.com	Successful Send
733946	gmail.com	themontanapost@gmail.com	Successful Send
279494	mt.gov	teverts@mt.gov	Successful Send
707609	theoutlawpartners.com	taylor@theoutlawpartners.com	Successful Send
757661	environomicsusa.com	tammyjohnson@environomicsusa.com	Successful Send
811822	gmail.com	Tallenzag@gmail.com	Successful Send
296806	mt.gov	szehtner@mt.gov	Successful Send
343790	cfaluminum.com	swright@cfaluminum.com	Successful Send
740116	sglong.com	swilliams@sglong.com	Successful Send
811778	rangeweb.net	swanson115@rangeweb.net	Successful Send
811779	ymail.com	Supersport@ymail.com	Successful Send
740121	gmail.com	suetaylor120@gmail.com	Successful Send
821158	aol.com	stroebebam@aol.com	Successful Send
343789	bkbh.com	stevew@bkbh.com	Successful Send
815111	evcohs.com	sterlingfarms4@evcohs.com	Successful Send
811404	gmail.com	Stacylea10@gmail.com	Successful Send
797335	mtech.edu	sreed@mtech.edu	Successful Send
557269	oasisemission.com	sobrien@oasisemission.com	Successful Send
406692	mt.gov	snowakowski@mt.gov	Successful Send
365678	industrialinfo.com	smullins@industrialinfo.com	Successful Send
812121	stignatiusschools.org	smccollum@stignatiusschools.org	Successful Send
172021	hydrometrics.com	smason@hydrometrics.com	Successful Send
790558	mt.gov	sjuers@mt.gov	Successful Send
363505	anadarko.com	sherry.bursey@anadarko.com	Successful Send
811933	mtintouch.net	shaunalp@mtintouch.net	Successful Send
369986	rosi-boise.com	Shannon.morgan@rosi-boise.com	Successful Send

2015 and 2016 EXCEPTION EVENT  
INTERESTED PARTIES

MemberID	Domain	Email Address	Status
778844	hydrosi.com	shaneb@hydrosi.com	Successful Send
785984	hydrosi.com	scottw@hydrosi.com	Successful Send
731827	mt.gov	scoe@mt.gov	Successful Send
363841	natlforests.org	sbombard@natlforests.org	Successful Send
812137	gmail.com	saraleojojo@gmail.com	Successful Send
363840	gmail.com	sabskb@gmail.com	Successful Send
811818	yahoo.com	S_Gideon_98@yahoo.com	Successful Send
373998	stillwatermining.com	RWeimer@stillwatermining.com	Successful Send
358767	transcanada.com	ruth_jensen@transcanada.com	Successful Send
293167	aol.com	Runningelkcliff@aol.com	Successful Send
303415	hayfam.com	rr@hayfam.com	Successful Send
811939	yahoo.com	rptree5@yahoo.com	Successful Send
706788	imerys.com	ron.hyatte@imerys.com	Successful Send
813753	warmstone.com	ron@warmstone.com	Successful Send
837501	terracon.com	robyn.sargent@terracon.com	Successful Send
726658	msn.com	robertkjeffrey@msn.com	Successful Send
728264	us.af.mil	robert.richards.12@us.af.mil	Successful Send
802232	fageninc.com	rkimball@fageninc.com	Successful Send
557161	cgrs.com	rkenyon@cgrs.com	Successful Send
812152	m-m.net	rkeech@m-m.net	Successful Send
772677	yahoo.com	richardsburnett@yahoo.com	Successful Send
772225	mt.gov	rharbage@mt.gov	Successful Send
621667	h2eincorporated.com	rgilson@H2Eincorporated.com	Successful Send
811820	me.com	Reservegolfer@me.com	Successful Send
810026	oasispetroleum.com	Relliott@oasispetroleum.com	Successful Send
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163700	p66.com	reed.j.marton@p66.com	Successful Send
543996	northernplains.org	rebecca@northernplains.org	Successful Send
373405	centurytel.net	rdriear@centurytel.net	Successful Send
811929	aol.com	rbojack60@aol.com	Successful Send
785825	yahoo.com	quasarn4@yahoo.com	Successful Send
829941	greatfallsmt.net	pskubinna@greatfallsmt.net	Successful Send
785839	mt.gov	Pschaefer@mt.gov	Successful Send
812130	charter.net	popp22@charter.net	Successful Send
460888	stoltzelumber.com	pmckenzie@stoltzelumber.com	Successful Send
570980	hotmail.com	pkukay@hotmail.com	Successful Send
343786	pplweb.com	pjsimonich@pplweb.com	Successful Send
590726	stanleygroup.com	phippsangela@stanleygroup.com	Successful Send
767247	shawn.net	Pharmacy@shawn.net	Successful Send
811965	gmail.com	penningtondestiny270@gmail.com	Successful Send
812078	gmail.com	peggykane64@gmail.com	Successful Send
812151	aol.com	pearling@aol.com	Successful Send
168880	yahoo.com	pauldsherrpc@yahoo.com	Successful Send
343785	chsinc.com	Pat.kimmet@chsinc.com	Successful Send
812106	gmail.com	owen.royce@gmail.com	Successful Send
811892	yahoo.com	obrienkim73@yahoo.com	Successful Send
568913	gmail.com	nturnbull2@gmail.com	Successful Send



2015 and 2016 EXCEPTION EVENT  
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752489	gmail.com	Npitblado@gmail.com	Successful Send
811946	yahoo.com	npickhardt@yahoo.com	Successful Send
785752	gmail.com	ninadgrey@gmail.com	Successful Send
363347	msn.com	nickgeranios4317@msn.com	Successful Send
733844	hussfilters.com	nicholas.hobbs@hussfilters.com	Successful Send
811937	yahoo.com	natures_elements@yahoo.com	Successful Send
811863	montana.edu	Nathan.stark@montana.edu	Successful Send
793167	bison-eng.com	nathan@bison-eng.com	Successful Send
740261	northernplains.org	natalie@northernplains.org	Successful Send
811924	gmail.com	myonedragon@gmail.com	Successful Send
373404	hydrometrics.com	mwignot@hydrometrics.com	Successful Send
807938	all4inc.com	mwenclawiak@all4inc.com	Successful Send
812146	gmail.com	Mtsplce@gmail.com	Successful Send
811926	outlook.com	mtmelissa@outlook.com	Successful Send
811401	gmail.com	mtgirl87@gmail.com	Successful Send
363337	mtaudubon.org	mtaudubon@mtaudubon.org	Successful Send
811893	livingstonmontana.org	mtarr@livingstonmontana.org	Successful Send
811855	gmail.com	mrs.riffey@gmail.com	Successful Send
345924	pplweb.com	mrlambrecht@pplweb.com	Successful Send
812076	gmail.com	mr.mhavens@gmail.com	Successful Send
348288	newfield.com	mpontiff@newfield.com	Successful Send
163708	montanapetroleum.org	mpa@montanapetroleum.org	Successful Send
823572	aol.com	montanahunts@aol.com	Successful Send
343783	plumcreek.com	Mitchell.Leu@plumcreek.com	Successful Send
811920	live.com	Mistyh20@live.com	Successful Send
811940	gmail.com	missoulayouthfootball@gmail.com	Successful Send
562055	yahoo.com	miosh_com@yahoo.com	Successful Send
603373	gmail.com	mike.simpson2009@gmail.com	Successful Send
836469	p66.com	mike.r.benson@p66.com	Successful Send
724522	northwestern.com	Mike.Barnes@northwestern.com	Successful Send
811394	umontana.edu	michael.kavanaugh@umontana.edu	Successful Send
242070	trinityconsultants.com	mhillman@trinityconsultants.com	Successful Send
761410	gmail.com	Mhicks6888@gmail.com	Successful Send
812079	gmail.com	mcmahonj38@gmail.com	Successful Send
812005	bresnan.net	mcgrathmikejoy@bresnan.net	Successful Send
374295	mt.net	mcferrins@mt.net	Successful Send
457446	ap.org	mbrown@ap.org	Successful Send
373390	greatfallsmt.net	mbasta@greatfallsmt.net	Successful Send
755595	flatheadcitizens.org	Mayre@flatheadcitizens.org	Successful Send
739798	msn.com	maureneh@msn.com	Successful Send
763722	northwestern.com	marygail.sullivan@northwestern.com	Successful Send
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378449	gmail.com	mark.lin@gmail.com	Successful Send
724352	riverstonehealth.org	marilyn.tap@riverstonehealth.org	Successful Send

2015 and 2016 EXCEPTION EVENT  
INTERESTED PARTIES

MemberID	Domain	Email Address	Status
455877	aecom.com	Margaret.Zebley@aecom.com	Successful Send
761740	gmail.com	mardavscott@gmail.com	Successful Send
502980	cskt.org	marcellama@cskt.org	Successful Send
811997	donaldsonbros.com	Mandie@dona1dsonbros.com	Successful Send
739278	yahoo.com	MaineBear26@yahoo.com	Successful Send
345936	mt.gov	lzanto@mt.gov	Successful Send
530271	nemont.net	lweeks@nemont.net	Successful Send
738294	gmail.com	Lukeduane@gmail.com	Successful Send
407941	stmaryland.com	lstuder@stmaryland.com	Successful Send
753680	mt.gov	lradonich@mt.gov	Successful Send
700128	gmail.com	Loraderm@gmail.com	Successful Send
490540	jacobs.com	lonnie.fallin@jacobs.com	Successful Send
463844	trinityconsultants.com	Inguyen@trinityconsultants.com	Successful Send
463843	trinityconsultants.com	lmoral@trinityconsultants.com	Successful Send
602210	wpcnd.com	lloken@wpcnd.com	Successful Send
574139	trinityconsultants.com	lkambham@trinityconsultants.com	Successful Send
706787	imerys.com	lindsay.spurlock@imerys.com	Successful Send
807872	mt.gov	LHedalen@mt.gov	Successful Send
812563	newfields.com	lgraham@newfields.com	Successful Send
810177	conocophillips.com	Lewis.R.Schoenberger@conocophillips.com	Successful Send
382444	yahoo.com	lepodal@yahoo.com	Successful Send
545235	rocketmail.com	leah.bennett@rocketmail.com	Successful Send
785608	frontiernet.net	lbenitz@frontiernet.net	Successful Send
752287	cldpk.com	Laura.Ackermann@cldpk.com	Successful Send
811912	blackfoot.net	larrymc@blackfoot.net	Successful Send
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835736	pacelabs.com	kyna.hogg@pacelabs.com	Successful Send
164502	enviroconsult.com	kwalsh@enviroconsult.com	Successful Send
823559	aol.com	Kvamster@aol.com	Successful Send
811927	bresnan.net	Kseyler@bresnan.net	Successful Send
812110	gmail.com	Kranzeli@gmail.com	Successful Send
603594	fvcc.edu	krandall@fvcc.edu	Successful Send
811880	carroll.edu	kparsley@carroll.edu	Successful Send
499341	mt.gov	korr@mt.gov	Successful Send
812138	icloud.com	Kmcintyre19@icloud.com	Successful Send
757795	gmail.com	kkennett22@gmail.com	Successful Send
811410	gmail.com	kjmock45@gmail.com	Successful Send
811980	yahoo.com	kjames1021@yahoo.com	Successful Send
241577	hotmail.com	kirsty_gilmour@hotmail.com	Successful Send
785966	p66.com	kim.a.olsen@p66.com	Successful Send
389104	libby.org	khooper@libby.org	Successful Send
812027	gmail.com	Kholmqui@gmail.com	Successful Send
785592	pioneer-technical.com	kgillespie@pioneer-technical.com	Successful Send
812217	hotmail.com	Kerifoerster@hotmail.com	Successful Send
836528	me.com	Kenre@me.com	Successful Send
807676	ymail.com	kenfoote47@ymail.com	Successful Send
812153	bigskycapital.com	Kelly@bigskycapital.com	Successful Send



2015 and 2016 EXCEPTION EVENT  
INTERESTED PARTIES

MemberID	Domain	Email Address	Status
757811	gmail.com	keertiman.5820.sarangi@gmail.com	Successful Send
761741	gmail.com	kd7zlu@gmail.com	Successful Send
761306	bresnan.net	Kchase@bresnan.net	Successful Send
812081	missoulain.com	kbriggeman@missoulain.com	Successful Send
823568	scoutep.com	kbrand@scoutep.com	Successful Send
811405	gmail.com	kbjellahow@gmail.com	Successful Send
811868	yahoo.com	kathleenknuffb@yahoo.com	Successful Send
757860	brfcf.org	Kat@brfcf.org	Successful Send
459053	mdu.com	Kalle.Kuether@mdu.com	Successful Send
743956	gmail.com	juliusyu86@gmail.com	Successful Send
296803	mt.gov	jugorowski@mt.gov	Successful Send
804883	wellsfargo.com	judy.shackelford@wellsfargo.com	Successful Send
811861	gmail.com	jsundem@gmail.com	Successful Send
734149	rmsmanagement.com	jskoog@rmsmanagement.com	Successful Send
463081	cherrycreekradio.com	jscott@cherrycreekradio.com	Successful Send
321823	flathead.mt.gov	jrussell@flathead.mt.gov	Successful Send
811860	monfortonschool.org	jrobidou@monfortonschool.org	Successful Send
811999	gmail.com	jroberts4618@gmail.com	Successful Send
771911	flatheadmemo.com	jrc@flatheadmemo.com	Successful Send
782608	mt.gov	jpodolinsky@mt.gov	Successful Send
812129	gmail.com	joshmpeck@gmail.com	Successful Send
506005	yahoo.com	josephfdepaz@yahoo.com	Successful Send
421562	exxonmobil.com	joseph.w.lierow@exxonmobil.com	Successful Send
785724	p66.com	Joseph.Gustafson@p66.com	Successful Send
590502	gmail.com	jonnysanty@gmail.com	Successful Send
621665	xtoenergy.com	john_mcmichael@xtoenergy.com	Successful Send
603215	ibew.org	john_lei@ibew.org	Successful Send
374004	senatorjohn.net	John@SenatorJohn.net	Successful Send
365375	shumaker.psemail.com	Joe@shumaker.psemail.com	Successful Send
726639	hotmail.com	joanna_547@hotmail.com	Successful Send
343780	pplweb.com	jmparker@pplweb.com	Successful Send
724720	msn.com	jmherbenison@msn.com	Successful Send
499317	mt.gov	jmerkel@mt.gov	Successful Send
478725	marathonpetroleum.com	JMBlanco@marathonpetroleum.com	Successful Send
811921	gmail.com	Jlrockworks@gmail.com	Successful Send
810045	westernsugar.com	jlivingston@westernsugar.com	Successful Send
811865	yahoo.com	Jkcsampson@yahoo.com	Successful Send
812035	gmail.com	jjbrhunt@gmail.com	Successful Send
811890	gmail.com	Jillgail8@gmail.com	Successful Send
723577	wbip.com	jill.linn@wbip.com	Successful Send
807168	easystreet.net	jhesketh@easystreet.net	Successful Send
812093	gmail.com	jhames.beijing@gmail.com	Successful Send
296808	mt.gov	jford2@mt.gov	Successful Send
764474	mrss.com	jfirehammer@mrss.com	Successful Send
571191	babcock.com	jfdowns@babcock.com	Successful Send
811947	gmail.com	jessie.wiese@gmail.com	Successful Send
740235	gmail.com	jespv1@gmail.com	Successful Send

2015 and 2016 EXCEPTION EVENT  
INTERESTED PARTIES

MemberID	Domain	Email Address	Status
740095	yahoo.com	JeremyFlesch@yahoo.com	Successful Send
786222	westonsolutions.com	jenny.omara@westonsolutions.com	Successful Send
343779	ogap.org	jennifergoldman@ogap.org	Successful Send
345938	hotmail.com	Jenna_k_02@hotmail.com	Successful Send
543851	ashgrove.com	jeff.briggs@ashgrove.com	Successful Send
168389	ajaxcomputernetworking.com	jeff@ajaxcomputernetworking.com	Successful Send
811866	gmail.com	jeanniebolt2008@gmail.com	Successful Send
397650	yahoo.com	jeannehallesy@yahoo.com	Successful Send
457345	conocophillips.com	jean.semborski@conocophillips.com	Successful Send
764024	swca.com	jdawson@swca.com	Successful Send
752585	compliance-partners.com	jdauner@compliance-partners.com	Successful Send
772322	slrconsulting.com	jchristopher@slrconsulting.com	Successful Send
584155	bison-eng.com	jchaffee@bison-eng.com	Successful Send
811945	bresnan.net	jcdeal@bresnan.net	Successful Send
739799	glacierbancorp.com	jcarlson@glacierbancorp.com	Successful Send
378053	mod2.com	javid@mod2.com	Successful Send
750621	oneok.com	jason.lyons@oneok.com	Successful Send
772499	northwestern.com	jason.boeckel@northwestern.com	Successful Send
811888	aol.com	jandd7@aol.com	Successful Send
568884	slservices.net	jamiew@slservices.net	Successful Send
812103	gmail.com	jamielynn.mcbryan@gmail.com	Successful Send
786037	appliedwater.net	jamie@appliedwater.net	Successful Send
812232	gmail.com	Jadinvan@gmail.com	Successful Send
365517	nemontel.net	jackross@nemontel.net	Successful Send
811878	yahoo.com	j1ceead@yahoo.com	Successful Send
365390	kakuk.com	info@kakuk.com	Successful Send
790482	starlineunlimited.com	info@starlineunlimited.com	Successful Send
363339	northernplains.org	info@northernplains.org	Successful Send
373403	lion.com	info@lion.com	Successful Send
699085	mt.gov	hthigpen@mt.gov	Successful Send
811395	hotmail.com	Hslosson@hotmail.com	Successful Send
584157	bison-eng.com	hrobbins@bison-eng.com	Successful Send
533691	mt.gov	hrash@mt.gov	Successful Send
812030	msn.com	honiebee72@msn.com	Successful Send
811963	gmail.com	Hilda.wise345@gmail.com	Successful Send
408752	gmail.com	hhsgreengroup@gmail.com	Successful Send
560539	montanarefining.com	hbedbury@montanarefining.com	Successful Send
836393	calumetspecialty.com	hadley.bedbury@calumetspecialty.com	Successful Send
584149	bison-eng.com	grodway@bison-eng.com	Successful Send
812143	gmail.com	grizlinke@gmail.com	Successful Send
770930	gmail.com	gregahildebrand@gmail.com	Successful Send
343777	chsinc.com	Greg.brown@chsinc.com	Successful Send
770931	isrcapital.com	greg@isrcapital.com	Successful Send
812155	icloud.com	grantm02@icloud.com	Successful Send
742526	gmail.com	gpeakl@gmail.com	Successful Send
836264	talenenergy.com	gordon.criswell@talenenergy.com	Successful Send
812134	gmail.com	ggarrison1953@gmail.com	Successful Send



2015 and 2016 EXCEPTION EVENT  
INTERESTED PARTIES

MemberID	Domain	Email Address	Status
742591	alliedengineering.com	gfox@alliedengineering.com	Successful Send
369506	sierraresearch.com	gcm@sierraresearch.com	Successful Send
282029	msn.com	gaila_consulting@msn.com	Successful Send
812108	gmail.com	frmomiller@gmail.com	Successful Send
277672	shumaker.psemail.com	frank@shumaker.psemail.com	Successful Send
502610	ups.com	fotto@ups.com	Successful Send
820983	msn.com	folson5@msn.com	Successful Send
812083	hotmail.com	Fjordlady@hotmail.com	Successful Send
739736	ftsd.org	fisherm@ftsd.org	Successful Send
764623	aol.com	firewmmom@aol.com	Successful Send
812124	deq.state.or.us	feeley.eric@deq.state.or.us	Successful Send
343775	doneylaw.com	fcrowley@doneylaw.com	Successful Send
739734	yahoo.com	expedite.maynard@yahoo.com	Successful Send
771120	mt.gov	eulrich2@mt.gov	Successful Send
811400	gmail.com	ethan.schroeder@gmail.com	Successful Send
407723	platts.com	esa@platts.com	Successful Send
726335	rfpco.com	erich@rfpco.com	Successful Send
751171	dgsllaw.com	eric.waeckerlin@dgsllaw.com	Successful Send
602962	cldpk.com	eric.detmer@cldpk.com	Successful Send
812150	bresnan.net	enigma1647@bresnan.net	Successful Send
354639	yahoo.com	emilieboyles@yahoo.com	Successful Send
569120	fageninc.com	emcrae@fageninc.com	Successful Send
812140	gmail.com	elizabethlarence@gmail.com	Successful Send
811996	icloud.com	Elisa.serret@icloud.com	Successful Send
378228	gmail.com	elbrunner@gmail.com	Successful Send
762245	yahoo.com	ehbd1939@yahoo.com	Successful Send
590740	montana.edu	edward.hook1@montana.edu	Successful Send
603216	hotmail.com	edmadler@hotmail.com	Successful Send
812299	gmail.com	Edarmstrong2@gmail.com	Successful Send
345931	mt.net	ed@mt.net	Successful Send
296804	mt.gov	dwalsh@mt.gov	Successful Send
603217	msn.com	dvanhyning1@msn.com	Successful Send
505273	mt.gov	dujohnson@mt.gov	Successful Send
407150	hotmail.com	dugiejm@hotmail.com	Successful Send
735011	flatheadbeacon.com	dtabish@flatheadbeacon.com	Successful Send
795136	mt.gov	dsutliff@mt.gov	Successful Send
590769	bresnan.net	dsoehren@bresnan.net	Successful Send
757841	bison-eng.com	dskibicki@bison-eng.com	Successful Send
296807	mt.gov	dsimonson@mt.gov	Successful Send
373394	multistate.com	dshonerd@multistate.com	Successful Send
785951	hotmail.com	donettaa1@hotmail.com	Successful Send
373392	tetrattech.com	donald.may@tetrattech.com	Successful Send
781959	mt.gov	dmyers@mt.gov	Successful Send
461794	mt.gov	dmunson@mt.gov	Successful Send
560930	bresnan.net	dlorenzo@bresnan.net	Successful Send
811998	gmail.com	djacobs32@gmail.com	Successful Send
811930	yahoo.com	dilydaly2@yahoo.com	Successful Send

2015 and 2016 EXCEPTION EVENT  
INTERESTED PARTIES

MemberID	Domain	Email Address	Status
811413	gmail.com	Diehl23@gmail.com	Successful Send
241654	midrivers.com	dhrubes@midrivers.com	Successful Send
572860	cleanair.com	dhart@cleanair.com	Successful Send
834082	mt.gov	DHanson@mt.gov	Successful Send
830206	mt.gov	DHansen@mt.gov	Successful Send
802536	mcilvainecompany.com	dfox@mcilvainecompany.com	Successful Send
603038	yahoo.com	detroit03mm@yahoo.com	Successful Send
761384	yahoo.com	desmoinesnancy@yahoo.com	Successful Send
811960	hotmail.com	Desireedutton@hotmail.com	Successful Send
621419	oneok.com	deborah.perry@oneok.com	Successful Send
507796	yahoo.com	debbies_design@yahoo.com	Successful Send
811406	yahoo.com	Deannenidaho@yahoo.com	Successful Send
751673	centurytel.net	ddiscovery@centurytel.net	Successful Send
360170	ncpa.org	dblank@ncpa.org	Successful Send
335621	eogresources.com	david_long@eogresources.com	Successful Send
601508	kirkwoodcompanies.com	davew@kirkwoodcompanies.com	Successful Send
361183	yahoo.com	daveduttonfraser@yahoo.com	Successful Send
751675	bison-eng.com	daveb@bison-eng.com	Successful Send
773620	teck.com	Dave.Enos@teck.com	Successful Send
727944	hotmail.com	dave.burnett99@hotmail.com	Successful Send
774855	rckymtn.com	dave@rckymtn.com	Successful Send
558615	avistacorp.com	darrell.soyars@avistacorp.com	Successful Send
811989	hsd3.org	danielsk@hsd3.org	Successful Send
807535	bresnan.net	danders23@bresnan.net	Successful Send
345914	mso.umt.edu	dan.corti@mso.umt.edu	Successful Send
763716	msn.com	dallasmt@msn.com	Successful Send
699084	bresnan.net	d.keane@bresnan.net	Successful Send
812149	gmail.com	Cygnetaakemt@gmail.com	Successful Send
734980	co.bighorn.mt.us	ctaft@co.bighorn.mt.us	Successful Send
812063	ccsystems.com	crystal.augustine@ccsystems.com	Successful Send
568260	yahoo.com	cranecreations1@yahoo.com	Successful Send
811877	gmail.com	cptnmel@gmail.com	Successful Send
603812	ltenv.com	cpowell@ltenv.com	Successful Send
811936	gmail.com	courtneyyarbro@gmail.com	Successful Send
772227	aecom.com	courtney.taylor@aecom.com	Successful Send
502217	yahoo.com	coupscounter@yahoo.com	Successful Send
811922	q.com	countrycuddles@q.com	Successful Send
739569	gmail.com	Corie.downey@gmail.com	Successful Send
755118	blm.gov	corey_meier@blm.gov	Successful Send
804601	adm.com	corena.pendry@adm.com	Successful Send
818431	us.af.mil	cody.koontz@us.af.mil	Successful Send
812115	bresnan.net	Cmhoiness@bresnan.net	Successful Send
345930	midrivers.com	cmhd@midrivers.com	Successful Send
397819	plainsjustice.org	claseur@plainsjustice.org	Successful Send
755102	riverstonehealth.org	clark.sny@riverstonehealth.org	Successful Send
343755	hotmail.com	cindymed@hotmail.com	Successful Send
810143	gmail.com	Cindyathisfeet@gmail.com	Successful Send



2015 and 2016 EXCEPTION EVENT  
INTERESTED PARTIES

MemberID	Domain	Email Address	Status
502665	cskt.org	chuckp@cskt.org	Successful Send
463260	netentrust.com	chuck@netentrust.com	Successful Send
603462	landauinc.com	chalbert@landauinc.com	Successful Send
807928	ltenv.com	cdimarco@ltenv.com	Successful Send
795192	barrick.com	cbuus@barrick.com	Successful Send
461258	mt.gov	cboe@mt.gov	Successful Send
739122	belgradeschools.com	cbengtson@belgradeschools.com	Successful Send
761359	gmail.com	Cathyweeden@gmail.com	Successful Send
343772	bkbh.com	cathyl@bkbh.com	Successful Send
174513	mac.com	cartoonsmart@mac.com	Successful Send
785601	stillwater.mt.gov	carkell@stillwater.mt.gov	Successful Send
811993	yahoo.com	cacewild@yahoo.com	Successful Send
377280	yahoo.com	c2nites2000@yahoo.com	Successful Send
345932	montana.com	bvaughn@montana.com	Successful Send
811887	aol.com	bullseyews@aol.com	Successful Send
771128	gmail.com	bulldog.aw47@gmail.com	Successful Send
374079	rosipower.com	Bstevenson@rosipower.com	Successful Send
288747	nicnd.com	BSquires@nicnd.com	Successful Send
761399	energycorporationofamerica.com	bschmidt@energycorporationofamerica.com	Successful Send
463754	naes.com	Bruce.Krepley@naes.com	Successful Send
706899	serafinatechnical.com	brinda@serafinatechnical.com	Successful Send
373393	tetrattech.com	brian.mchugh@tetrattech.com	Successful Send
584144	bison-eng.com	bret@bison-eng.com	Successful Send
761332	aol.com	brandyjeepgirl@aol.com	Successful Send
762231	samson.com	bradr@samson.com	Successful Send
742338	kochind.com	brad.korpi@kochind.com	Successful Send
545783	ashgrove.com	bob.vantuyl@ashgrove.com	Successful Send
811990	icloud.com	bmmcrey@icloud.com	Successful Send
164160	stateside.com	bml@stateside.com	Successful Send
771203	gmail.com	Blazewoodtj@gmail.com	Successful Send
455876	gmail.com	blakecrk@gmail.com	Successful Send
602281	hotmail.com	blaise.leblanc@hotmail.com	Successful Send
373406	summite.com	bjohnson@summite.com	Successful Send
785637	live.com	bigskycountrypreschool_mt@live.com	Successful Send
739376	yahoo.com	big49sky@yahoo.com	Successful Send
296818	mt.gov	bhabeck@mt.gov	Successful Send
534552	blackfoot.net	bettylu@blackfoot.net	Successful Send
567878	tetrattech.com	benjamin.recker@tetrattech.com	Successful Send
362413	msn.com	beamman6056@msn.com	Successful Send
602220	aol.com	bayxie@aol.com	Successful Send
733831	bdlaw.com	bacttracking@bdlaw.com	Successful Send
341541	hotmail.com	aussie_northcott@hotmail.com	Successful Send
559210	gmail.com	astecpermits@gmail.com	Successful Send
730875	aes4home.com	artr@aes4home.com	Successful Send
743924	rdoequipment.com	arakow@rdoequipment.com	Successful Send
739743	gmail.com	antoine.paul33@gmail.com	Successful Send
740080	yahoo.com	anthonycalvert01@yahoo.com	Successful Send

2015 and 2016 EXCEPTION EVENT  
INTERESTED PARTIES

MemberID	Domain	Email Address	Status
785905	nemont.net	anita.jbates@nemont.net	Successful Send
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807449	gmail.com	amysvolmer@gmail.com	Successful Send
811897	gmail.com	amandamkibc@gmail.com	Successful Send
740078	q.com	alimurray@q.com	Successful Send
811956	gmail.com	alexjack265@gmail.com	Successful Send
389128	cdm.com	alexanderrrr@cdm.com	Successful Send
811883	ssa.gov	alex.robert@ssa.gov	Successful Send
811399	gmail.com	akimble53@gmail.com	Successful Send
811994	yahoo.com	Ahewett14@yahoo.com	Successful Send
706647	trinityconsultants.com	ahenolson@trinityconsultants.com	Successful Send
343751	meic.org	ahedges@meic.org	Successful Send
811935	gmail.com	aedanielson@gmail.com	Successful Send
785610	gmail.com	acnay21@gmail.com	Successful Send
462464	bloomberg.net	aclark27@bloomberg.net	Successful Send
785568	mt.gov	abranzspall@mt.gov	Successful Send
457465	mdu.com	Abbie.Krebsbach@mdu.com	Successful Send
811398	bresnan.net	3lanes@bresnan.net	Successful Send
345916	nemontel.net	2horses@nemontel.net	Successful Send

## Public Comment Periods

By Subject or Program:

- Air Quality Permits
- Draft TMDL Reports
- Water Quality Discharge Permits
- Nutrient Management Plans
- Coal and Uranium Program
- Openpit Permits. Enter County, site name and/or contractor to navigate to page.

*The documents listed in the links above may not be included in the list below.*

The DEQ Public Comment Site shows major programs open for comment with instructions on how to enter comments and attachments.

Electronic Comments Only to the Draft Environmental Assessment analyzing potential environmental impacts that may result from the proposed exploration activity by Lucky Minerals, Inc. [Comment period ended midnight, December 12, 2016.]

DEQ will not respond to comments that are threatening, delamatory, libelous, slanderous, or discriminatory in nature.

Site/Subject	Comment Period Ends	Document Location	Send Comments To
The Department of Environmental Quality is inviting public comment on the submission of an administrative request to the US Environmental Protection Agency (EPA) to exclude certain ambient air monitoring data from regulatory review. 2015 and 2016 Exception Events Public Notice 2015-2016 PM2.5 Flagged Data 2015-2016 PM10 Flagged Data 2015-2016 PM2.5 Historical Graphs 2015-2016 PM10 Historical Graphs	To be guaranteed consideration, written comments must be postmarked on or before 5:00 p.m. April 8, 2017	Montana Department of Environmental Quality Metcalf Building Air Quality Bureau 1520 E. 6th Avenue Helena MT 59601	Kristen Martin Montana Department of Environmental Quality Air Quality Bureau PO Box 200901 Helena MT 59620-4541 or electronically via e-mail to: <a href="mailto:kristen.martin@mt.gov">kristen.martin@mt.gov</a>

# STATE OF MONTANA

## 2015 & 2016 WILDFIRES AFFECT AMBIENT AIR QUALITY DATA

### I. 2015 and 2016 SUMMER WILDFIRES

For purposes of justifying Montana's request for data exclusion as a result of wildfire smoke adversely affecting ambient air quality monitoring data collected in 2015 and 2016, the following evidence demonstrates the satisfaction of requirements of 40 CFR §50.14(c)(3)(iv)(A) through (E):

*(A): A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s).*

To demonstrate wildfires cause the anomalous PM<sub>2.5</sub> and PM<sub>10</sub> values represented by flagged data days and locations, Montana relies on its forest fire smoke update reports. During the months of June, July, August, September, and October, Montana's air quality meteorologist issued wildfire smoke update reports of wildfire events. The reports were generally posted before 4:00 PM each day during which a wildfire occurred that affected Montana's air quality. Periodically an updated report would be issued on days when the air quality was changing.

Each report contains:

- a report and forecast of the air quality across Montana, as well as a brief summary of this information including smoke activity forecasts;
- satellite images showing smoke in the region from a variety of sources including the National Oceanic and Atmospheric Administration, National Atmospheric and Space Administration, National Weather Service, Canadian government, and other available sources;
- photos from the National Park Service, US Forest Service, the Department, as well as other community web cam photos that visibly show smoke in the air;
- when available, maps showing the location of large wildfire incidents across the US and Canada, and maps showing the smoke impact areas;
- analyses of current meteorological conditions;
- advisories and precautionary statements; and
- links to further information.

Wildland fires are considered natural events as human activity plays little or no direct causal role in their origin or maintenance. By their nature, as contrasted with managed fires, wildland fires are not reasonably controllable or preventable. Additionally, while the smoke effects of any wildfire event may be exacerbated by air stagnation or meteorological inversion, particularly on a diurnal basis as winds decrease during the night and smoke settles into cooler, low-elevation airsheds, these air stagnation or meteorological inversions are not influencing the occurrences of the events themselves.

While the administrator may not, a priori, make a determination regarding the characterization of the events submitted as exceptional events, Montana asserts this evidence satisfies the requirement of 40 CFR §50.14(c)(3)(iv)(A).

*(B): A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation;*

For each event shown in the reports and tables, the wildfire smoke update report demonstrates the cause of any flagged higher-than-average air quality measurement at a monitoring location. Wildfire smoke is shown to impact the monitor through satellite images, photographs, and maps of wildfire incidents and smoke impact areas. For each monitoring location and as referenced in the wildfire smoke updates reports, the cause of any flagged higher-than-average air quality monitoring measurement is a wildfire event.

*(C): Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times to support the requirement at paragraph (c)(3)(iv)(B) of this section. The Administrator shall not require a State to prove a specific percentile point in the distribution of data;*

The historical graphs for 2015 and 2016 at locations with flagged data are included with this document. These historical graphs review PM2.5 and PM10 measured values during the wildfire season that begins June 1 and continues through October 31. The graphs show the flagged data along with the historical daily mean, seasonal 95<sup>th</sup> percentile, seasonal mean and the NAAQS. These graphs show that the flagged data is associated with values in excess of normal historical fluctuations.

Montana is not aware of any evidence implicating any other agent or event as a cause of or significant contributor to the higher-than-average values represented by the flagged data presented in the spreadsheets. It is most likely that the higher-than-average values have been recorded due to the occurrence of wildfire events. One may reasonably conclude wildfire events were in fact the cause of the higher-than-average flagged values.

*(D): A demonstration that the event was both not reasonably controllable and not reasonably preventable;*

Wildfires are uncontrollable burns in nature. There are no simple controls or preventable measures available to stop or extinguish a wildfire. They have always been a natural part of the life cycle on undeveloped lands.

*(E): A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event.*

Wildfires are uncontrollable burns occurring in nature.



NO PUBLIC COMMENTS WERE RECEIVED FOR FLAGGING AIR QUALITY  
DATA AFFECTED BY WILDFIRE FOR 2015 AND 2016.

Kristen Martin 4/17/17

Kristen Martin

Date

## Summary of 2015 & 2016 PM<sub>2.5</sub> Exceptional Events in Montana

The following dates and locations are being submitted to the Environmental Protection Agency as PM<sub>2.5</sub> exceptional events for 2015 and 2016. The associated wildfire smoke update for each date is provided as a hyperlink in the date column. For all dates where a wildfire smoke update is available a brief reason is provided for the exceptional event. Please contact the Montana Department of Environmental Quality at 406-444-3490 if you have any questions or concerns.

Date	Site	24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Reason
<a href="#">6/29/2015</a>	Malta Sidney	43.1 40.7	A dense plume of smoke moving off the Canadian fires impacted eastern Montana. Light smoke buildup under a strong and hot ridge of high pressure impacted western Montana.
<a href="#">6/30/2015</a> And <a href="#">PM Update</a>	Malta Sidney	133.4 98.2	Concentrations started high in eastern Montana under a dense plume from the Canadian fires and decreased throughout the day. Hazy skies and light smoke continues to impact western Montana under a strong ridge of high pressure.
<a href="#">7/2/2015</a>	Malta	49.5	Dense smoke from Canadian fires continues to impact Montana today, with the worst impacts east of the Continental Divide.
<a href="#">7/3/2015</a>	Malta	42.1	Dense smoke continues to impact most of eastern Montana today from fires in Canada. Fires in Washington and Oregon are causing some light impacts in western Montana.
<a href="#">7/5/2015</a>	Birney Lewistown Sidney	39.9 37.2 42.6	Strong winds brought smoke from fires in Canada into Montana during the afternoon. A fire near Lewistown Montana caused more localized impacts.
<a href="#">7/8/2015</a>	Sidney	43.1	Northeastern Montana continues to be impacted by the dense smoke moving down from Saskatchewan while the rest of the state is seeing impacts from wildfires in the Pacific Northwest, including British Columbia.
<a href="#">8/2/2015</a>	Libby	41.6	The Wolverine Fire in Washington State sent smoke into western Montana. A handful of fires in southeast Montana caused impacts in Birney and Broadus.
<a href="#">8/3/2015</a> And <a href="#">PM Update</a>	Libby	63.7	Smoke moved into the state from numerous large fires in Washington, Oregon, and Northern California as a ridge of high pressure trapped smoke over Montana. The higher concentrations in Libby are due to the Wolverine Creek Fire in Washington State
<a href="#">8/15/2015</a> And <a href="#">PM Update</a>	Butte Frenchtown Hamilton Helena	65.4 38.6 99.8 48.7	New fires ignited throughout central Idaho and western Montana due to strong winds and frequent lightning after a week of hot, dry weather. Nine new large fires were reported in the Northern Rockies and eight new large fires

Date	Site	24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Reason
	Lewistown Missoula NCore	40.1 60.9 49.4	were reported in the Pacific Northwest. The largest new fire in Montana was the Eustice Fire north of Three Forks. Other large new fires in Montana include the Melton Fire near Dillion, the Scotchmans Gulch Fire near Philipsburg, the Trail Creek Fire near Swan Lake, and the Klatawa Fire near Libby at 156 acres. Fire activity also increased significantly on existing fires in Montana including the Sucker Creek Fire near Lincoln, the Marston Fire near Eureka, and the Weigel Fire near Libby. Fires in Idaho also contributed to the widespread smoke impacts.
<a href="#">8/16/2015</a> And <a href="#">PM Update</a>	Hamilton	44.0	Extensive fire activity throughout central Idaho and western Montana caused smoke impacts throughout Montana. A large plume of smoke originated from the Clearwater Complex Fire in Idaho. In addition to this fire, 15 new large incidents were reported in Idaho and Montana due to the thunderstorm activity on Friday evening.
<a href="#">8/17/2015</a> And <a href="#">PM Update</a>	Hamilton	46.2	Smoke impacts were caused by 12 large fires burning in Montana and 8 large fires in Idaho. In addition, 40 new small fires were reported across Idaho and Montana.
<a href="#">8/18/2015</a> And <a href="#">PM Update</a>	Hamilton	69.2	Smoke impacts were limited to areas close to the Idaho/Montana border due to fire activity in Washington and Idaho. Elsewhere in the state, smoke impacts were kept to a minimum.
<a href="#">8/19/2015</a> And <a href="#">PM Update</a>	Butte Flathead* Frenchtown Hamilton Libby	44.1 41.4 42.1 90.9 51.1	Satellite imagery confirms significant smoke spreading across Montana from Idaho and Washington. Fire activity in Montana has also increased, leading to widespread significant smoke impacts by late afternoon.
<a href="#">8/20/2015</a> And <a href="#">PM Update</a>	Birney Broadus Butte Flathead* Frenchtown Hamilton Helena Lewistown Libby Missoula NCore	39.0 43.6 82.8 106.5 67.7 125.4 79.6 74.1 80.4 68.0 63.1	Satellite imagery showed a river of smoke from eastern Washington moving up into Canada and then down along western Montana in the morning, moving to the east throughout the day. Westerly winds and generally dry conditions caused smoke to impact the region throughout the day.

Date	Site	24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Reason
<a href="#">8/21/2015</a> And <a href="#">PM Update</a>	Birney Broadus Butte Flathead* Frenchtown Hamilton Helena Lewistown Libby Missoula NCore	52.2 47.5 58.4 73.7 53.3 147.4 66.0 78.6 49.0 67.8 62.9	Active fires in Washington, Idaho, and Montana continued to cause elevated smoke levels across Montana.
<a href="#">8/22/2015</a> And <a href="#">PM Update</a>	Hamilton	49.1	After a brief reprieve in smoke impacts due to a cold front moving through the state, smoke moved back into western Montana in the evening. Smoke still lingered in eastern Montana as the cold front moved across the state.
<a href="#">8/23/2015</a>	Butte Flathead* Frenchtown Hamilton Libby Missoula	41.8 95.4 44.2 58.6 40.2 41.9	Smoke continued to move into western Montana from fire activity in Washington, Idaho, and Montana. Conditions worsened throughout the day.
<a href="#">8/24/2015</a> And <a href="#">PM Update</a>	Flathead* Frenchtown Hamilton Helena Libby Missoula NCore	111.2 82.8 58.9 51.7 165 74.9 52.3	Prolonged smoke impacts expected due to a large ridge of high pressure over the western U.S. and significant fire activity in Montana and neighboring states.
<a href="#">8/25/2015</a> And <a href="#">PM Update</a>	Butte Flathead* Frenchtown Hamilton Helena Lewistown Libby Malta Missoula NCore	56.0 85.7 90.6 121.3 67.6 49.3 89.1 38.6 86.4 61.3	Satellite imagery shows a large amount of smoke over almost all of Montana. This smoke is being trapped under a ridge of high pressure that impacted the area until August 30, 2015. Westerly winds aloft continue to carry smoke into the region from the numerous fires burning in western Montana, Idaho, and eastern Washington.

Date	Site	24-hr PM <sub>2.5</sub> (µg/m³)	Reason
<a href="#">8/26/2015</a> And <a href="#">PM Update</a>	Flathead*	91.1	
	Frenchtown	64.7	
	Hamilton	101.6	
	Helena	50.6	
	Lewistown	47.8	
	Libby	78.7	
	Malta	56.6	
	Missoula	66.8	
	NCore	48.4	
<a href="#">8/27/2015</a> And <a href="#">PM Update</a>	Flathead*	104.4	
	Frenchtown	85.5	
	Hamilton	136.6	
	Helena	50.1	
	Lewistown	48.5	
	Libby	88.5	
	Missoula	73.5	
	NCore	35.5	
<a href="#">8/28/2015</a> And <a href="#">PM Update</a>	Birney	62.0	
	Broadus	82.7	
	Butte	85.3	
	Flathead*	97.7	
	Frenchtown	133.7	
	Helena	82.1	
	Lewistown	51.6	
	Libby	63.6	
	Malta	75.0	
	Missoula	126.4	
	NCore	67.7	
	Sidney	62.5	
<a href="#">8/29/2015</a>	Birney	46.0	
	Broadus	46.5	
	Butte	89.3	
	Flathead*	77.6	
	Frenchtown	124.7	
	Hamilton	196.8	
	Helena	94.2	
	Lewistown	58.5	
	Libby	59.6	

Date	Site	24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Reason
	Malta	97.3	
	Missoula	132.4	
	NCore	85.4	
	Sidney	75.9	
<a href="#">8/30/2015</a>	Broadus	35.6	
	Frenchtown	38.8	
	Hamilton	62.8	
	Helena	54.9	
	Missoula	35.7	
	NCore	39.8	
<a href="#">9/25/2015</a>	Libby	38.3	The Goat Rock Complex Fire, located to the south of Libby sent smoke into the valley. This smoke was then trapped under an overnight inversion.
<a href="#">9/28/2015</a>	Libby	48.9	Smoke from a fire located to the south of Libby, MT can be seen on satellite imagery. This smoke is causing localized but significant impacts.
<a href="#">9/29/2015</a>	Libby	80.9	
<a href="#">10/1/2015</a>	Libby	69.0	
<a href="#">10/2/2015</a>	Libby	58.3	
<a href="#">10/5/2015</a>	Libby	46.4	
<a href="#">10/6/2015</a>	Libby	63.5	
<a href="#">8/1/2016</a>	Hamilton	68.1	The Roaring Lion Fire, located near Hamilton, MT burned through over 3,000 acres in just a few hours on August 1, 2016. This fire caused smoke impacts in Hamilton throughout the first week of August.
<a href="#">8/2/2016</a>	Hamilton	40.4	
<a href="#">8/5/2016</a>	Hamilton	40.4	
<a href="#">8/6/2016</a>	Hamilton	36.7	
<a href="#">8/22/2016</a> And <a href="#">PM Update</a>	Hamilton	37.5	A handful of fires in the Selway-Bitterroot sent smoke in to Hamilton beginning at 6pm. The Moose fire, located 25 miles to the west of Hamilton looks to be the largest contributor of smoke.
<a href="#">8/28/2016</a>	Hamilton	57.7	A handful of fires in the Selway-Bitterroot sent smoke in to Hamilton beginning at about 4pm. The smoke began to clear around 3am the following morning.

\* The 'Flathead' monitor refers to the PM<sub>2.5</sub> monitor located in Columbia Falls, MT. When referenced in wildfire smoke updates, and in this document, it is called Flathead to match the label on the Montana DEQ Today's Air Website.

## Summary of 2015-2016 Exceptional Events in PM<sub>10</sub> Non-attainment areas (NAA) of Montana.

The following dates and locations are being submitted to the Environmental Protection Agency as exceptional events for 2015 and 2016 for PM<sub>10</sub>. The associated wildfire smoke update for each date is provided as a hyperlink in the date column. For all dates where a wildfire smoke update is available a brief reason is provided for the exceptional event. All of the online documentation is also available in a Word document with additional supporting information. This document will be submitted with the exceptional events final package. Please contact the Montana Department of Environmental Quality at 406-444-3490 if you have any questions or concerns.

Date	Site	24 Hour PM <sub>10</sub> µg/m <sup>3</sup>	Reason
<a href="#">8/14/2015</a> And <a href="#">PM Update</a>	Thompson Falls	105	Eight fires larger than 100 acres burned in Montana along with numerous other small fires throughout the western part of the state. Smoke was clearly visible on satellite imagery throughout the day. Satellite imagery indicated numerous smoke plumes in northwest Montana and Idaho and widespread smoke over eastern Montana.
<a href="#">8/15/2015</a> And <a href="#">PM Update</a>	Butte Missoula	100 133	New fires ignited throughout central Idaho and western Montana due to strong winds and frequent lightning after a week of hot, dry weather. Nine new large fires were reported in the Northern Rockies and eight new large fires were reported in the Pacific Northwest. The largest new fire in Montana was the Eustice Fire north of Three Forks. Other large new fires in Montana include the Melton Fire near Dillion, the Scotchmans Gulch Fire near Philipsburg, the Trail Creek Fire near Swan Lake, and the Klatawa Fire near Libby at 156 acres. Fire activity also increased significantly on existing fires in Montana including the Sucker Creek Fire near Lincoln, the Marston Fire near Eureka, and the Weigel Fire near Libby. Fires in Idaho also contributed to the widespread smoke impacts.
<a href="#">8/20/2015</a> And <a href="#">PM Update</a>	Butte Columbia Falls Kalispell Libby Whitefish Missoula	103 140 125 113 128 101	Satellite imagery showed a river of smoke from eastern Washington moving up into Canada and then down along western Montana in the morning, moving to the east throughout the day. Westerly winds and generally dry conditions caused smoke to impact the region throughout the day.
<a href="#">8/21/2015</a> And <a href="#">PM Update</a>	Columbia Falls Kalispell Whitefish Missoula	112 103 131 116	Active fires in Washington, Idaho, and Montana continued to cause elevated smoke levels across Montana.



Date	Site	24 Hour PM <sub>10</sub> µg/m <sup>3</sup>	Reason
<a href="#">8/23/2015</a>	Columbia Falls	112	Smoke continued to move into western Montana from fire activity in Washington, Idaho, and Montana. Conditions worsened throughout the day.
<a href="#">8/24/2015</a> And <a href="#">PM Update</a>	Columbia Falls Kalispell Libby Thompson Falls Whitefish Missoula	138 139 180 117 122 104	Prolonged smoke impacts expected due to a large ridge of high pressure over the western U.S. and significant fire activity in Montana and neighboring states.
<a href="#">8/25/2015</a> And <a href="#">PM Update</a>	Columbia Falls Libby Whitefish Missoula	109 102 106 120	Satellite imagery shows a large amount of smoke over almost all of Montana. This smoke is being trapped under a ridge of high pressure that impacted the area until August 30, 2015. Westerly winds aloft continue to carry smoke into the region from the numerous fires burning in western Montana, Idaho, and eastern Washington.
<a href="#">8/26/2015</a> And <a href="#">PM Update</a>	Columbia Falls Kalispell Thompson Falls Missoula	112 125 135 104	
<a href="#">8/27/2015</a> And <a href="#">PM Update</a>	Columbia Falls Kalispell Libby Thompson Falls Whitefish Missoula	136 123 109 122 118 119	
<a href="#">8/28/2015</a> And <a href="#">PM Update</a>	Butte10 Columbia Falls Kalispell Whitefish Missoula	115 135 133 110 181	
<a href="#">8/29/2015</a>	Butte Columbia Falls Kalispell Libby Thompson Falls Whitefish Missoula	118 138 146 143 143 104 276	
<a href="#">8/30/2016</a>	Thompson Falls	135	The Copper King Fire, located next to Thompson Falls, MT created significant air quality impacts in town.



## 2015 & 2016 EXCEPTIONAL EVENTS DOCUMENTATION

June 2015.....	2
July 2015.....	10
August 2015 .....	34
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August 2016 .....	243

## 2015 EXCEPTIONAL EVENTS DOCUMENTATION

JUNE 2015

### Summary of Exceptional Events

Date	Site	24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Reason
<a href="#">6/29/2015</a>	Malta Sidney	43.1 40.7	A dense plume of smoke moving off the Canadian fires impacted eastern Montana. Light smoke buildup under a strong and hot ridge of high pressure impacted western Montana.
<a href="#">6/30/2015</a> And <a href="#">PM Update</a>	Malta Sidney	133.4 98.2	Concentrations started high in eastern Montana under a dense plume from the Canadian fires and decreased throughout the day. Hazy skies and light smoke continues to impact western Montana under a strong ridge of high pressure.

JUNE 29, 2015

**PM2.5 Location(s):** Malta, Sidney

**Synopsis:** A dense plume of smoke moving off the Canadian fires impacted eastern Montana. Light smoke buildup under a strong and hot ridge of high pressure impacted western Montana.

#### Documentation:

*Wildfire Smoke Update for Tuesday, June 30, 2015 9:44 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=902>

#### Today's Report and Forecast

Between 9pm and 10pm last night the dense plume of smoke that has been impacting North Dakota and points east the last few days moved over northeast Montana. Visibility decreased drastically and hourly air quality impacts went from [GOOD](#) to [VERY UNHEALTHY](#) in the span of just 2 hours. Currently, 24 hour average concentrations are [VERY UNHEALTHY](#) in Malta and Sidney, while 8-hour average concentrations have reached [HAZARDOUS](#) levels in both locations. Residents in areas with dense smoke should stay indoors with windows closed and the air condition on, if possible, until visibility improves.

The causes of this smoke are the large wildfires in Canada, specifically in Alberta, Saskatchewan, and the Northwest Territories. The smoke could be easily seen on satellite imagery over North Dakota yesterday but had spared Montana up until this point due to the ridge of high pressure blocking the smoke from moving further west into Montana. Yesterday, a disturbance began moving through the ridge, causing it to weaken and allowed smoke to move down from the north. Easterly surface winds also helped to push smoke from North Dakota into the state.

A frontal passage is expected to move through eastern Montana later today, hopefully pushing most of the smoke further to the east. This will likely cause impacts to improve from south to north as the northwesterly winds push northward. Unfortunately, the plume of smoke from the extensive fire activity in Canada and Alaska does not look to be slowing down any time soon. This plume of smoke will likely impact eastern Montana on and off for some time.

Elsewhere, 24-hour concentrations are [MODERATE](#) in Frenchtown and the Flathead Valley and [GOOD](#) in all other locations. Another wildfire update will be sent later today to review new fire activity and provide an update on the situation in northeast Montana.

### **Today's Summary**

The dense smoke plume from fires in Canada moved over northwest Montana last night, causing a rapid decline in air quality in Malta, Sidney and other communities in northeast Montana. Some areas should see an improvement later today as winds are expected to shift to the northwest along a frontal passage. However, impacts may continue for most of the day in parts to the extreme north and east of the state.

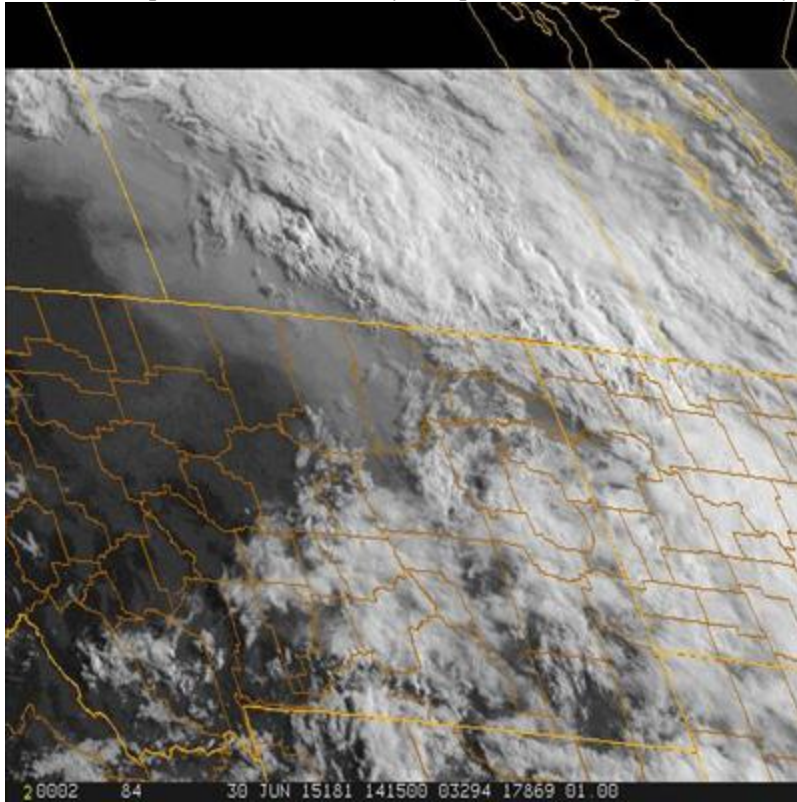
Another update will be posted this afternoon with an update on the situation in northeastern Montana and a review of any new fires from the thunderstorm activity last night.

Extremely hazy conditions are present across Fort Peck Lake this morning, due to the dense smoke moving down from Canada.



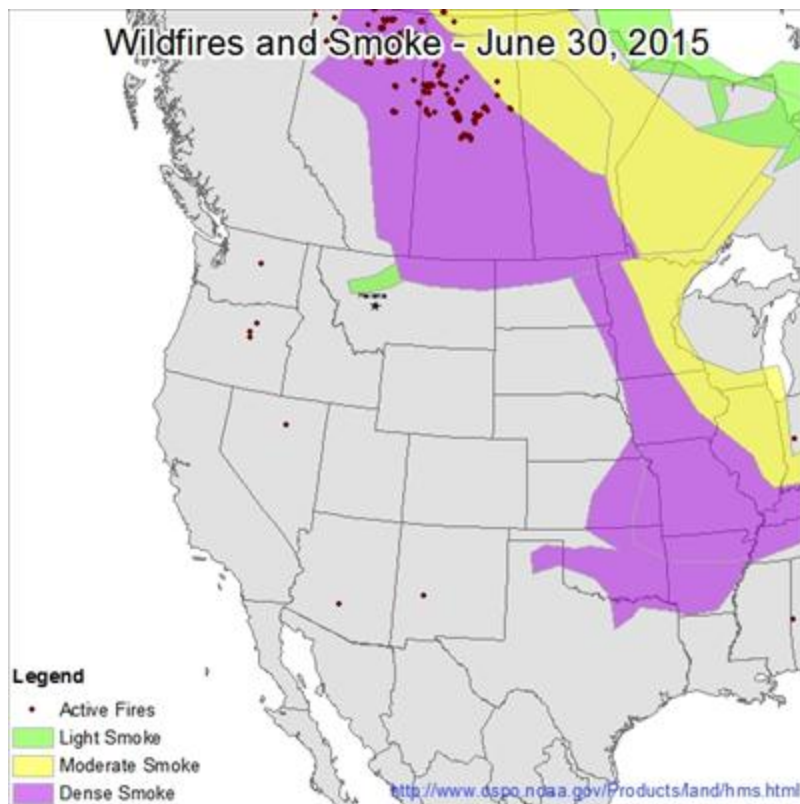
Source: [NOAA](#)

Satellite imagery from this morning shows the dense smoke moving over northeastern Montana. The smoke is in a dense plume with a relatively sharp line between good and very unhealthy air quality.









Source: [NWS](#)

Satellite analysis of smoke plumes shows that the smoke from fires in Canada moving down into northeast Montana when the ridge weakened last night. The disturbance has kept the smoke cornered in the state, with west- northwesterly winds keeping the air quality good to moderate in the rest of the state.



Source: [NOAA](http://www.dspo.noaa.gov/Products/land/hms.html)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	Malta (8hr) Sidney (8hr)
	<a href="#">Very Unhealthy</a>	Malta (24hr) Sidney (24hr)
	<a href="#">Unhealthy</a>	
	<a href="#">Unhealthy for Sensitive Groups</a>	
	<a href="#">Moderate</a>	Flathead Valley (24hr) Frenchtown (24hr)
	<a href="#">Good</a>	All other reporting sites.



## NOAA Text Description:

### DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY

#### SMOKE:

##### Central Canada/US:

A large area of light to heavy density smoke is visible over the majority of central Canada and US. This smoke originates from the numerous wildfires in southwestern/central Alaska as well as SE Yukon, southern portions of the NW Territories, northern Alberta, and northern Saskatchewan. The heaviest smoke is visible moving SE in NW Territories, Nunavut, western British Columbia, Alberta, Saskatchewan, Manitoba, western Ontario, Minnesota, eastern North Dakota, eastern South Dakota, western Iowa, Nebraska, eastern Kansas, and eastern Oklahoma. Medium smoke is visible moving E/SE in the NW Territories, Yukon, eastern British Columbia, Nunavut, northern Manitoba, northern Ontario, southern Minnesota, Iowa, Missouri, eastern Kansas, eastern Oklahoma, northern Arkansas, southern Illinois, Tennessee, northern Mississippi, northern Alabama, and northern Georgia. Light smoke is visible flanking areas of the heaviest smoke, affecting southern Saskatchewan, eastern Montana, North Dakota, South Dakota, and Missouri.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015F291555.html>

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JUNE 30, 2015

#### PM2.5 Location(s): Malta, Sidney

**Synopsis:** Concentrations started high in eastern Montana under a dense plume from the Canadian fires and decreased throughout the day. Hazy skies and light smoke continues to impact western Montana under a strong ridge of high pressure.

#### Documentation:

*Wildfire Smoke Update for Tuesday, June 30, 2015 4:19 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=903>

#### Today's Report and Forecast

After a dramatic start to the day in northeastern Montana, winds have shifted and hourly concentrations have decreased significantly over the past few hours. Hourly concentrations are currently [GOOD](#) in Sidney and Malta. 24 hour average concentrations will take some time to decrease. Note: The main Today's Air page will show the hourly health effect category for a given location if it is below 15 µg/m<sup>3</sup>, otherwise the 24 hour average health effect category will be displayed. Residents should check the hourly concentrations for the city of interest while the 24 hour values slowly decrease in northeast Montana.

The frontal passage changed the wind direction over northeast Montana as expected earlier today, helping to push the smoke out of the state about 14 hours after it moved in last night. Reports of smoke reached all the way south to Miles City before beginning to clear mid-morning. Hourly conditions in northeast Montana are expected to remain [GOOD](#) to [MODERATE](#) as winds help to keep the smoke out of the state this evening.

The extreme fire behavior in Canada will likely bring this smoke back into Montana at some point. As of now it looks like the plume may drift back into Montana on Wednesday evening or Thursday. Starting on Friday, westerly mid-level winds in Montana and Canada should push the smoke further east for the weekend.

The smoke situation in eastern Montana is not the only air quality impacts facing the state today. Western Montana continues to see hazy skies after days of record breaking heat. The showers and thunderstorms last night helped to improve air quality in the Helena Valley, where concentrations had been [MODERATE](#) for the past few days. Many may have noticed that the skies remained hazy this morning, due to the increase in humidity following the storms. Elsewhere, 24 hour average concentrations are [MODERATE](#) in Frenchtown and elevated, but [GOOD](#), in other cities around western Montana this afternoon.

Fire activity has increased today in Washington, Oregon, and Idaho, where a number of large fires are now being reported. Western Montana will be downwind of these fires on and off for the next several days. Impacts will vary depending on fire intensity and suppression efforts, but hazy skies are expected for most areas.

The thunderstorm activity yesterday caused a number of [fire starts](#) within the state, the most significant of which appear to be in [Townsend](#) and [Browning](#), where multiple acre fires are being reported. So far, the new fires have not had a significant impact on any monitor and webcams look slightly hazy but good throughout western Montana. Areas downwind of the fires should use visibility guidelines to determine the severity of the smoke impacts at any given time.

The [Glacier Rim Fire](#) continues to burn to the west of Glacier NP but smoke impacts have decreased significantly in areas around the park. [Webcams](#) in the park this afternoon show good air quality.

Air quality is expected to range from [GOOD](#) to [MODERATE](#) in most locations today and tomorrow. An increase in fire intensity of the known fires could cause impacts to reach [UNHEALTHY FOR SENSITIVE GROUPS](#). There is a chance the dense smoke may return to parts of eastern Montana over the next 48 hours before moving east. Additional updates will be sent if conditions worsen once again.

### **Today's Summary**

Hourly air quality has improved to [GOOD](#) in Sidney and [MODERATE](#) in Malta after a dangerous 12 hours of dense smoke. Conditions should continue to improve in northeast Montana as westerly winds help push the smoke out. Some impacts may linger in extreme northern Montana for a few more hours. The dense plume may drift back into Montana sometime Wednesday or Thursday before being pushed further east for the weekend.

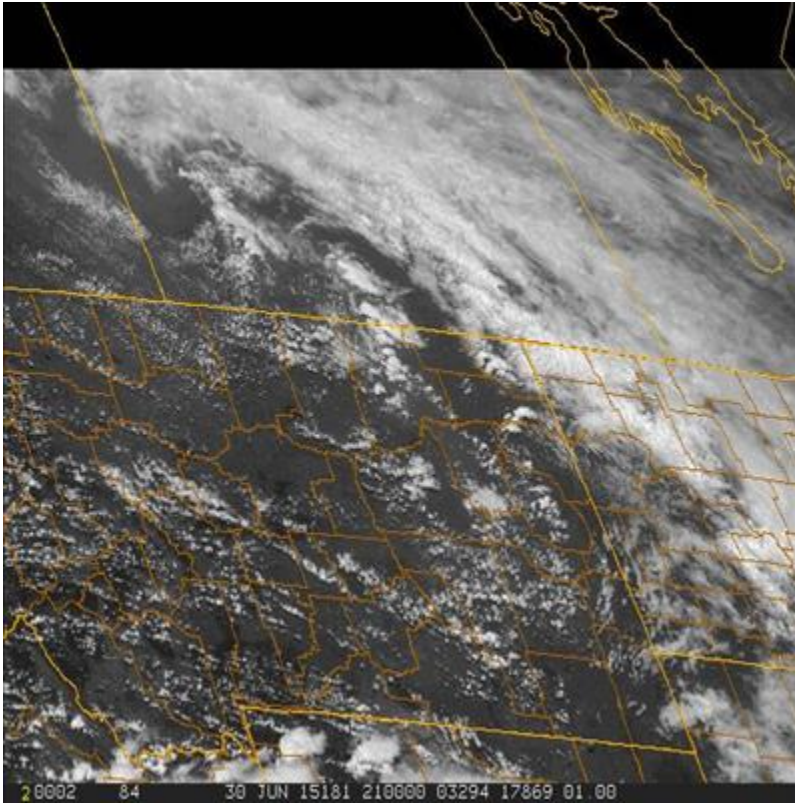
Elsewhere, several new fires were reported across the northwest and northern Rockies over the past 2 days. So far smoke impacts from these fires are remained [GOOD](#) to [MODERATE](#) with slightly hazy skies visible in most western valleys. Smoke impacts are expected to continue on and off throughout the week as fires pop up throughout Montana and neighboring areas.

Conditions are slightly hazy in the Bitterroot Valley this afternoon.



Source: [USFS](#)

Satellite imagery shows the dense smoke plume that was visible this morning has mostly cleared from northeast Montana.



Source: [NWS](#)

Large fire activity is increasing in Washington, Idaho, and Oregon after thunderstorms combined with the hot and dry conditions of the last 4 days. These fires have the potential to impact Montana in the coming days.



Source: [USFS](https://www.usfs.gov/)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	Malta (24hr) Sidney (24hr) Concentrations have decreased significantly this afternoon
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	
<a href="#">Unhealthy for Sensitive Groups</a>	
<a href="#">Moderate</a>	Frenchtown (24hr)
<a href="#">Good</a>	Malta (1hr) Sidney (1hr)

All other reporting sites.

### NOAA Text Description:

#### DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY

##### SMOKE:

##### Central Canada/US:

An expansive area of light to heavy density smoke was observed moving southeast into northern Yukon, the Northwest Territories, Nunavut, western Alberta, Saskatchewan, then split with denser smoke moving southward into the Mississippi River Valley and Tennessee Valley, and another area of medium density smoke moving eastward into Manitoba, western Ontario, with light smoke in Hudson Bay. Wildfires in southern portions of the Northwest Territories, northern Alberta and Saskatchewan are still producing heavy smoke in addition to the heavy smoke moving southward that continues to surge into the central US. Clouds in southern Alberta and southern Saskatchewan have begun to obscure dense smoke in southern Saskatchewan and southern Manitoba. This area of smoke originated from Alaskan and Canadian wildfires with the majority of the smoke coming from central Canada.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015F301517.html>

JULY 2015

#### Summary of Exceptional Events

Date	Site	24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Reason
<a href="#">7/2/2015</a>	Malta	49.5	Dense smoke from Canadian fires continues to impact Montana today, with the worst impacts east of the Continental Divide.
<a href="#">7/3/2015</a>	Malta	42.1	Dense smoke continues to impact most of eastern Montana today from fires in Canada. Fires in Washington and Oregon are causing some light impacts in western Montana.
<a href="#">7/5/2015</a>	Birney Lewistown Sidney	39.9 37.2 42.6	Strong winds brought smoke from fires in Canada into Montana during the afternoon. A fire near Lewistown Montana caused more localized impacts.
<a href="#">7/8/2015</a>	Sidney	43.1	Northeastern Montana continues to be impacted by the dense smoke moving down from Saskatchewan while the rest of the state is seeing impacts from wildfires in the Pacific Northwest, including British Columbia.

JULY 2, 2015

**PM2.5 Location(s):** Malta

**Synopsis:** Dense smoke from Canadian fires continues to impact Montana today, with the worst impacts east of the Continental Divide.



**Documentation:**

*Wildfire Smoke Update for Thursday, July 2, 2015 10:57 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=905>

**Today's Report and Forecast**

For much of the day yesterday the smoke from Canadian wildfires stayed north of a NW to SE line splitting the state in half. By evening, the smoke started to move further south and west, causing sudden impacts in Helena, Butte, and Bozeman. By the end of the day, 24 hour average concentrations were [UNHEALTHY FOR SENSITIVE GROUPS](#) in Malta, Sidney, Great Falls, Birney and Lewiston, and [MODERATE](#) in Helena, Bozeman, Butte, and Billings. A change to more westerly winds helped improve conditions in some areas overnight, with hourly levels showing significant improvement in Sidney, Lewistown, Great Falls, and Helena. The worst impacts this morning appear to be in Butte and Sidney, where hourly conditions are currently [MODERATE](#) and 24 hour averages are [UNHEALTHY FOR SENSITIVE GROUPS](#).

The brief improvement in Northern Montana will likely be short lived. A dense plume of smoke can be seen on satellite curling its way across the border from Canada this morning. Expect decreased visibility and elevated smoke impacts, reaching [UNHEALTHY](#) levels in areas impacted by this plume to linger for much of the day. By the end of the day most areas will have been impacted by this smoke, especially in areas east of the Continental Divide. As of 10:15am in Sidney, visibility had decreased to 2.5 miles and concentrations are starting to increase due to this smoke.

When will this smoke end? A ridge is present over eastern Montana today, helping to trap much of the Canadian smoke in the state. Beginning Friday afternoon, surface and mid-levels winds over eastern Montana are expected to shift, helping to interrupt the flow of smoke into the state. A weather disturbance is expected to swing through Canada over the weekend, also disrupting the endless plume of smoke moving into the U.S. It may take some time for the smoke to clear in many areas, due to stagnant conditions around the state. A stronger cold front is expected to push through on Saturday night into Sunday. This should help clear much of the remaining Canadian smoke from the area.

While the Canadian smoke is causing the biggest impacts to the state, there are still a number of fires in the Pacific Northwest and Northern Rockies that have the potential to cause air quality impacts in the future. So far, impacts have been limited to areas directly downwind of the fires with little impact to air quality in western Montana. As we move through the fire season, the fire activity in the west will likely have more significant impacts to the state.

**Today's Summary**

Air quality impacts are expected to continue in most areas of the state, especially east of the Divide. A dense plume of smoke can be seen on satellite moving into the state this morning. There will likely be periods of decreased visibility and smoke impacts reaching [UNHEALTHY](#) levels in areas east of the Divide today (and Butte). West of the Divide, air quality is expected to range from [GOOD](#) to [MODERATE](#).

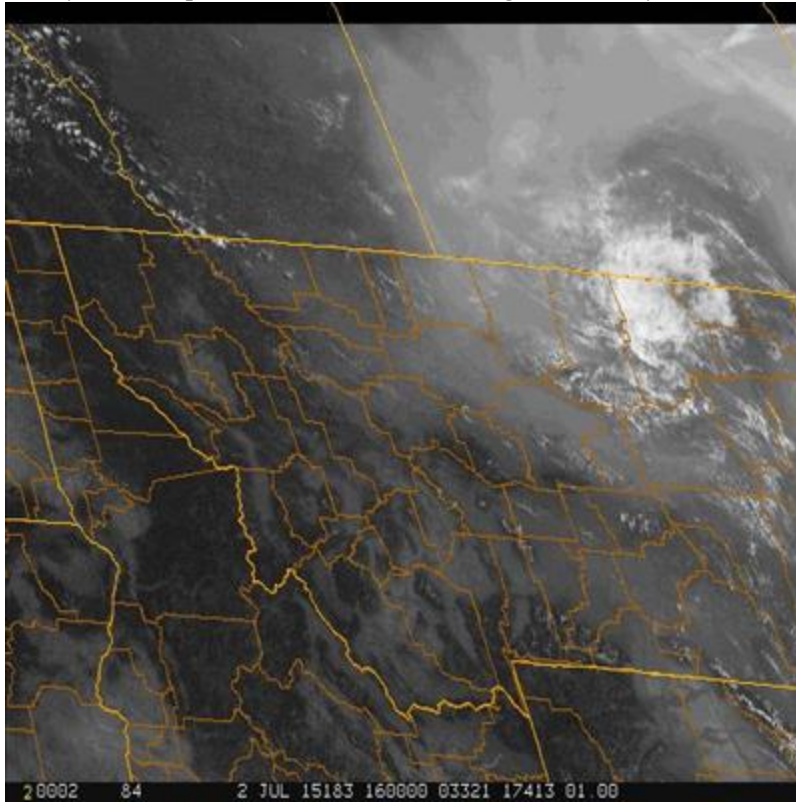
These impacts are expected to continue on and off for today and part of tomorrow. We should start to see improvement Friday night into Saturday with the best chance of clearing Saturday evening when a cold front pushes through the state.

Skies are hazy and air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#) in Butte this morning due to the wildfires in Canada.



Source: [KTVQ](#)

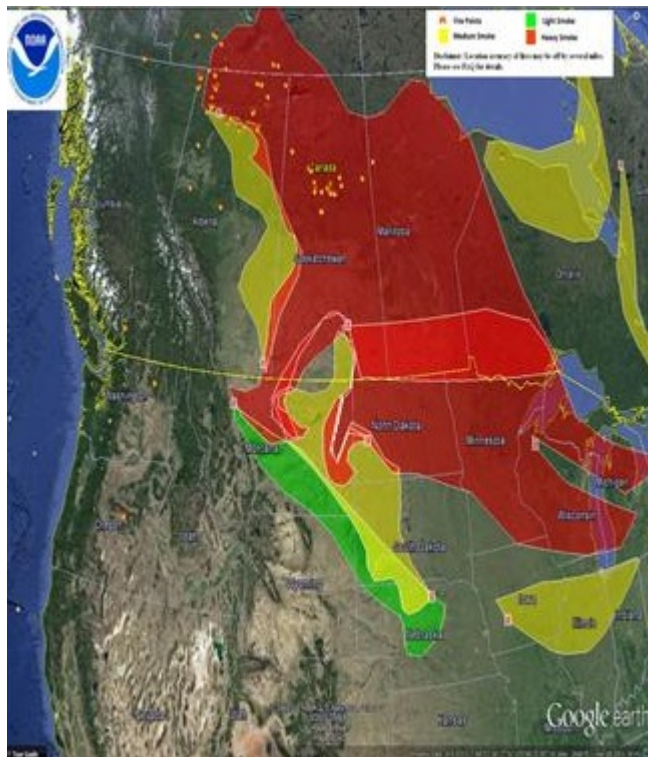
Dense smoke can be seen curling into Montana on satellite imagery. This smoke is already starting to impact Sidney and is expected to move south throughout the day.



Source: [NWS](#)



Satellite analysis of smoke from this morning shows dense smoke in central and eastern Montana. This smoke is expected to cause decreased visibility and significant air quality impacts around Montana today.



Source: [NOAA](https://www.noaa.gov/)

The active fires in the U.S. are not causing significant air quality concerns at this time. As the season progresses, these fires will have greater impacts to our area.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
<a href="#">Hazardous</a>		
<a href="#">Very Unhealthy</a>		
<a href="#">Unhealthy</a>		
<a href="#">Unhealthy for Sensitive Groups</a>		Sidney Malta Great Falls Butte Billings Lewistown
<a href="#">Moderate</a>		Helena Bozeman
<a href="#">Good</a>		All other reporting sites.

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1700Z July 2, 2015  
SMOKE:

Central Canada/U.S.

An expansive area of light to heavy density smoke is visible over a majority of North America this morning. This remnant smoke originates from the enormous amount of wildfires occurring in Alaska and central/northern Canada. Smoke from the Alaskan wildfires is visible moving east and then southeast, merging with the heavy smoke being emitted from the Canadian wildfires, where it spills south across the US border and east towards the Atlantic Ocean. Areas of heavy smoke include the NW Territories, Alberta, Saskatchewan, Manitoba, Montana, North Dakota, Minnesota, Ontario, Wisconsin, and Michigan. Medium smoke is observed in the NW Territories, Alberta, Saskatchewan, Ontario, Quebec, Montana, North Dakota, South Dakota, Nebraska, Iowa, Illinois, and Indiana. Areas of light smoke include the NW Territories, Nunavut, Alberta, Ontario, Montana, Wyoming, North Dakota, South Dakota, and Nebraska.  
<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015G021709.html>

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JULY 3, 2015

**PM2.5 Location(s):** Malta

**Synopsis:** Dense smoke continues to impact most of eastern Montana today from fires in Canada. Fires in Washington and Oregon are causing some light impacts in western Montana.

### Documentation:

*Wildfire Smoke Update for Friday, July 3, 2015 10:04 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=906>

### Today's Report and Forecast

Dense smoke continues to impact areas of Montana from the Continental Divide to the North Dakota border today. 24 hour average concentrations are currently [UNHEALTHY](#) in Malta and Lewistown, [UNHEALTHY FOR SENSITIVE GROUPS](#) in Great Falls, Bozeman, Billings, and Birney, and [MODERATE](#) in Butte and Helena. Hourly concentrations are [UNHEALTHY FOR SENSITIVE GROUPS](#) in Malta and [MODERATE](#) in Lewistown, Birney, Billings, and Bozeman as the smoke has expanded southward in the past few hours. The smoke can be easily seen on satellite imagery covering much of eastern Montana, with dense plumes over the central and eastern part of the state.

Unfortunately, the smoke will likely linger in many areas for much of the day and parts of tomorrow. There may be intermittent improvement in places, but overall expect haze skies and periods of decreased air quality through Saturday morning. The cold front moving through the area on Saturday is expected to bring gusty westerly winds across the state. These should help push the smoke to the east throughout the day. Improvements are expected along the Divide first, including Great Falls, Helena, and Butte, and then moving eastward throughout the afternoon and evening. Conditions in eastern Montana may briefly increase in severity as the smoke from the west accumulates as it moves out. A low pressure system moving over the fires in Canada may also help limit the amount of new smoke moving into the region.

In addition, satellite imagery has detected light smoke moving over western Montana from fires in Washington and Oregon, with more significant smoke at the source of these fires. So far concentrations have remained [GOOD](#) in areas west of the Divide, but hazy skies and [MODERATE](#) impacts are possible today and tomorrow. Smoke from these fires may cause impacts next week when westerly winds help carry smoke

into the state.

The fires in Montana continue to have minimal impact to the overall air quality, although areas directly downwind of the fires may see periods of moderate smoke. Conditions on the Glacier NP webcams this morning show hazy conditions in the eastern portion of the park, likely due to fog and smoke from the fire. Conditions here are expected to improve in the afternoon.

Lastly, a [Fire Weather Watch](#) will be in effect over much of western Montana through Saturday evening, meaning hot, dry, and windy conditions are expected. New fires in Montana during this time could have significant impacts on air quality depending on the size and location of the fires. Please follow local all burning restrictions before lighting any outdoor flames.

Happy 4th of July!

### Today's Summary

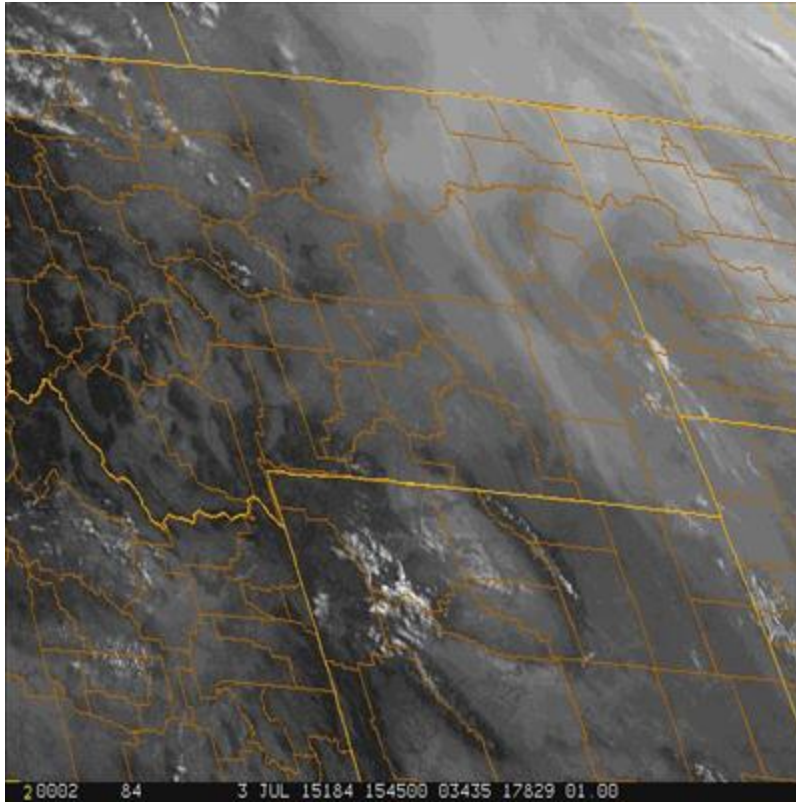
Significant air quality impacts continue in areas east of the Divide today as smoke from fires in Canada continue to send copious amounts of smoke into the state. The worst impacts continue to be in central Montana, where air quality is currently [UNHEALTHY](#). Impacts are expected to linger for much of the day for all impacted locations, with intermittent improvement. A cold front on Saturday should have enough strength to push most of this smoke to the east and finally bring some relief from the hazy skies. The fire season is just getting started, with the number of fires in neighboring states increasing each day we will likely see smoke impacts throughout next week.

Skies are hazy in Lewistown this morning, where smoke impacts reached [UNHEALTHY](#) levels overnight but hourly concentrations have shown improvement over the past few hours.



Source: [Big Spring Realty](#)

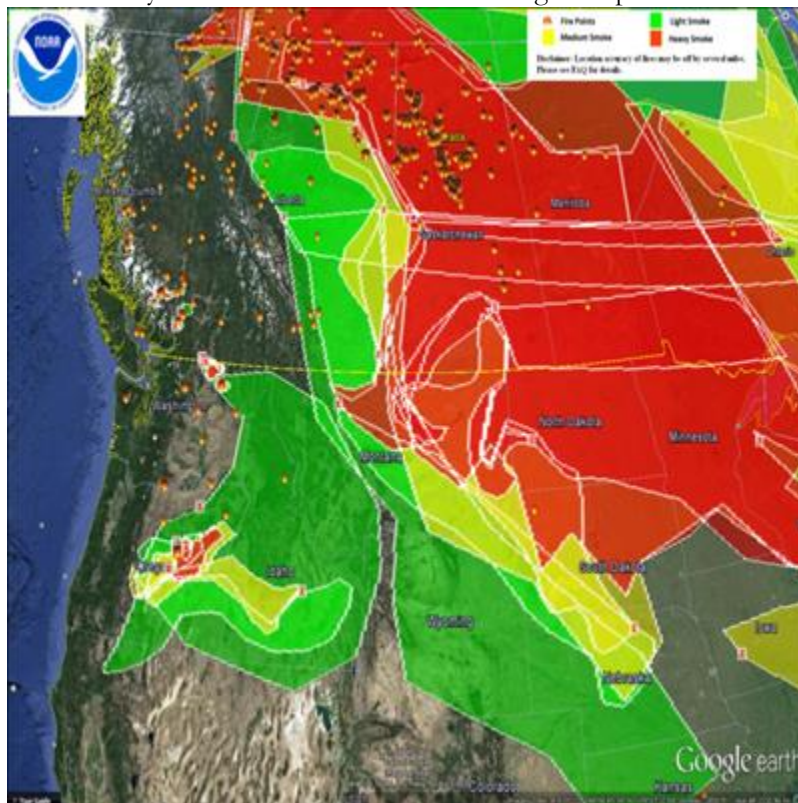
Dense smoke is visible on satellite imagery this morning over much of Montana east of the Divide, with the densest smoke over central and eastern Montana.



Source: [NWS](#)



Satellite analysis shows dense smoke continuing to impact Montana in areas east of the Divide today.



Source: [NOAA](https://www.noaa.gov/)



Large incidents continue to pop up in Washington and Oregon. This smoke is starting to spread westward, but impacts have been kept to a minimum so far in Montana.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Malta Lewistown
<a href="#">Unhealthy for Sensitive Groups</a>	Great Falls Bozeman Billings Birney
<a href="#">Moderate</a>	Helena Butte
<a href="#">Good</a>	All other reporting sites

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 2000Z July 3, 2015

### SMOKE:

Alaska/Canada/Central to Eastern U.S:

An enormous amount of wildfires occurring across central portions of Alaska as well as western/central Canada continues to create a prolific amount of generally moderately dense to very dense smoke. This smoke is seen traveling northeast and south/southwest across Alaska, the Gulf of Alaska, and the Beaufort Sea. Smoke also wraps west from the Northwest Territories back toward the Yukon and stretches southeast/east across Canada large portions of Canada. The large area of smoke extends into the U.S. from eastern Montana to the Great Lakes region and as far south as Kansas, Missouri, Illinois. The smoke stretches eastward over the Midwest and into western Pennsylvania/western New York and across the Mid-Atlantic region before turning northeast along the coast of the Northeastern U.S. to Nova Scotia and Newfoundland.

Pacific Northwest:

Patches of thin smoke to moderately dense smoke are visible over portions of northeast California, northern Nevada, northwest Utah, Oregon, eastern Washington, Idaho, and into Montana/northwest Wyoming as well as southern British Columbia. Several wildfires burning in Oregon, Washington, and southern British Columbia are the main culprits for this remnant and newly produced smoke that is generally moving eastward.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015G032006.html>

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JULY 5, 2015

**PM2.5 Location(s):** Birney, Lewistown, Sidney

**Synopsis:** Strong winds brought smoke from fires in Canada into Montana during the afternoon. A fire near Lewistown, MT caused more localized impacts.

### Documentation:

***Wildfire Smoke Update for Sunday, July 5, 2015 4:25 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=908>

## Today's Report and Forecast

There is a big change in the weather across all of Montana today. After days of daily 90 degree temperatures and dry, stagnant conditions, we are now seeing cloudy skies across the state. Rain showers and thunderstorms are moving through parts of Montana and gusty winds are prevalent across most of the state.

Unfortunately, the strong winds have carried in smoke that is currently impacting many locations around eastern Montana. 24 hour average concentrations are currently [UNHEALTHY FOR SENSITIVE GROUPS](#) in Sidney, Malta, Lewistown, Billings, Birney, and Great Falls, and [MODERATE](#) in Helena, Bozeman, and Broadus. Due to the widespread cloud cover over Montana, it is difficult to pinpoint the exact cause of this smoke. A northwest wind across the area is likely bringing down smoke from fires in British Columbia and parts of the Pacific Northwest. In addition, new fires are being reported in central Montana, including a 1,500 acre grass fire east of Lewistown. Lastly, newspapers are reporting a number of small grassfires due to fireworks around the state.

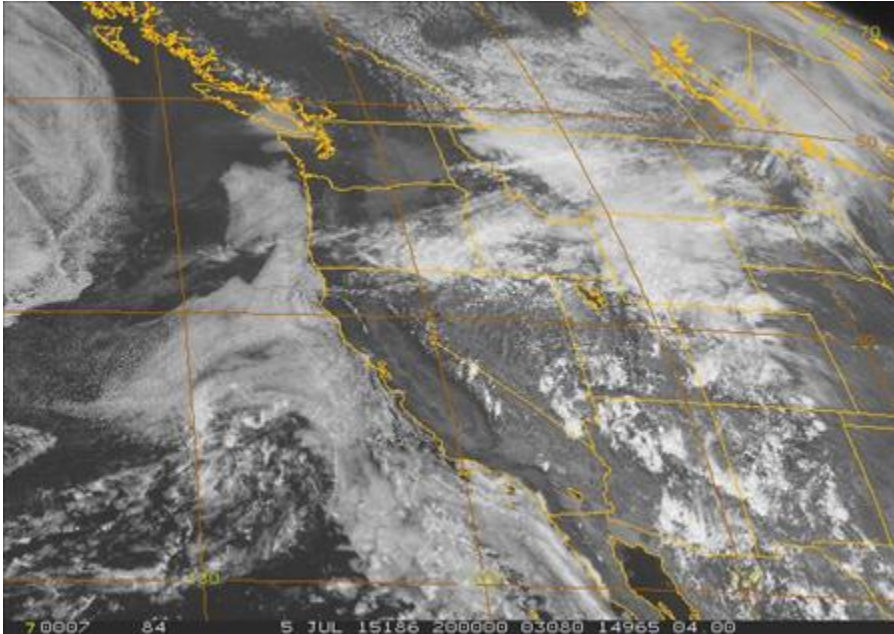
This week is expected to be cooler, with northwest flow aloft slowly transitioning to warmer temperatures and southwest flow towards the end of the week. With the number of fires surrounding Montana to the west,

northwest, and north, and the increase in fire activity within the state, Montana will likely be impacted by smoke for the foreseeable future.

### **Today's Summary**

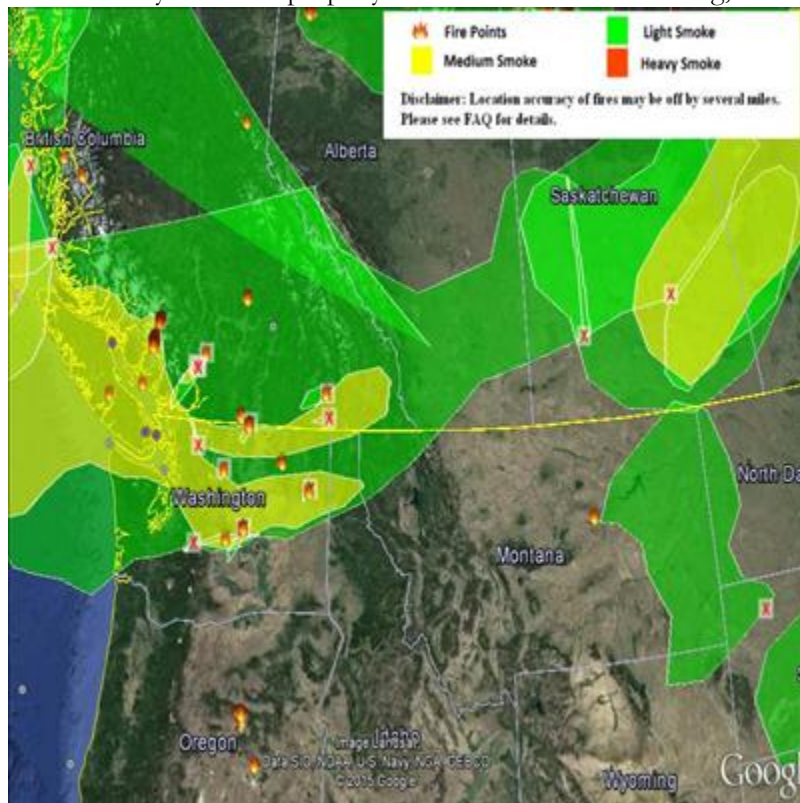
Widespread cloud cover, scattered showers, and smoke are present east of the Divide today. Montana is downwind of fires in British Columbia today, likely contributing to the smoke impacts. In addition, large fires are being reported in central Montana, although the full impacts of these fires are difficult to determine until more information becomes available.

There is widespread cloud cover across Montana today, associated with the cold front that brought much cooler temperatures to the area today.



Source: [NWS](#)

Satellite analysis cannot properly track the smoke this morning, due to the widespread cloud cover.



Source: [NOAA](#)

The following image shows large wildfire activity in the U.S.



Source: [USFS](http://www.usfs.gov)








Overcast conditions are present across much of Montana today, as can be seen in Billings.



Source: [KTVQ](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	
	<a href="#">Unhealthy</a>	
	<a href="#">Unhealthy for Sensitive Groups</a>	Sidney Malta Lewistown Billings Birney Great Falls
	<a href="#">Moderate</a>	Helena Bozeman Broadus
	<a href="#">Good</a>	All other reporting sites



## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 2000Z July 5, 2015

### SMOKE:

Alaska/Canada/Central to Eastern U.S:

The tremendous number of large wildfires continue to burn over vast stretches of northern Saskatchewan and Alberta with additional fires in southern Northwest Territories, northeast British Columbia, and northern/central Manitoba. These fires are producing an enormous amount of smoke that ranges across most of central Canada, across parts of Hudson Bay and into parts of western Quebec. The smoke is seen extending southward into the central U.S., into the Mississippi Valley, through the Great Lakes, Ohio and Tennessee Valley, across the Mid Atlantic and Northeast US. The smoke reaches as far south as northern Arkansas, western Tennessee and as far west as eastern Montana and the Dakotas. As mentioned before much of the smoke is moderately dense with embedded pockets of heavy density smoke, but cloud cover across some areas, specifically over central Canada, Quebec, southeastern U.S. and portions of the Mid Atlantic, make the overall extent of the smoke difficult to discern. One pocket of heavy smoke can be seen over parts of southern Saskatchewan, central Manitoba and NW Ontario moving northeast across central Canada. Another pocket is seen over parts of northern Saskatchewan, southeast Northwest Territories and western Nunavut moving east over northern Canada. The final heavy pocket is seen over the Great Lakes region, eastern Ontario, western Quebec and into western New York and into far northeast US. In Alaska, the smoke from the wildfires can be seen across northern/eastern Alaska and moving into the Yukon and Northwest Territory, but cloud cover is blocking the full view over these regions.

### Pacific Northwest:

Wildfires burning in British Columbia continue to produce smoke that currently is moving southward along the British Columbia and Pacific Coastline and into the Northwest US including Washington State. An area can be seen extending east along the Canada/US border including Alberta, Saskatchewan and into western Ontario and along northern Idaho and Montana. The areas of smoke further north over British Columbia and along the British Columbia coast are likely from fires in Alaska and have been traveling southward over the last couple of days

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015G052035.html>

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JULY 8, 2015

### PM2.5 Location(s): Sidney

**Synopsis:** Northeastern Montana continues to be impacted by the dense smoke moving down from Saskatchewan while the rest of the state is seeing impacts from wildfires in the Pacific Northwest, including British Columbia.

### Documentation:

*Wildfire Smoke Update for Wednesday, July 8, 2015 12:33 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=911>

### Today's Report and Forecast

Smoke made its way to the ground level in western Montana yesterday, causing lingering smoke impacts in many locations that had been spared the poor conditions of the past week. Eastern Montana continues to have significant smoke impacts, especially in northeastern Montana, where air quality is currently UNHEALTHY in Sidney. 24 hour values are currently UNHEALTHY FOR SENSITIVE GROUPS in Libby, Flathead, Seeley Lake, Frenchtown, Lewistown, Malta, and Broadus and MODERATE in Great Falls, Missoula, Helena, Butte, and Billings. Things have improved in

southeastern Montana this afternoon as sunny skies and warmer temperatures are helping to lift the smoke.

Northeastern Montana continues to be impacted by the dense smoke moving down from Saskatchewan while the rest of the state is seeing impacts from wildfires in the Pacific Northwest, including British Columbia. A large area of smoke can be seen on satellite this morning over eastern Washington and air quality in Spokane has reached unhealthy for sensitive groups. Here in Montana, the Glacier Rim Fire remains at 100 acres with mop up activities expected today. The Alex Camp Rd. fire is currently 50% contained with minimal fire behavior. These fires are not expected to contribute to the widespread air quality impacts seen around the state.

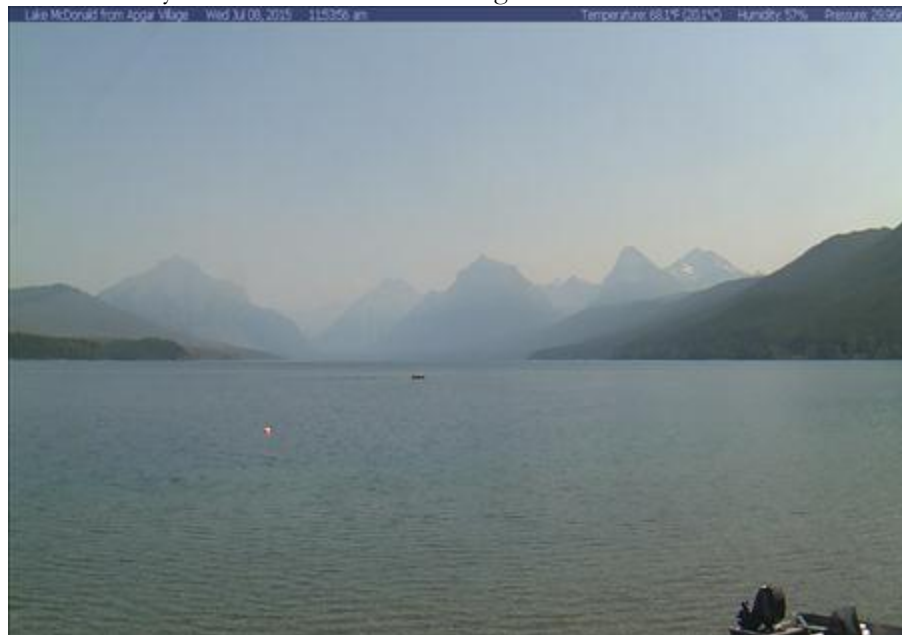
Smoke impacts and hazy skies will likely continue today as plumes of smoke from the north and west move over the state. Winds aloft will be shifting to the southwest over the next few days, which should redirect some of the smoke out of the state. In addition, showers and thunderstorms over the next few days may help clear some of the built up smoke. Unfortunately, the shift to southwest winds may bring more smoke depending on fire activity in Oregon. There are currently red flag warnings in effect in southern Oregon and Idaho, which could cause increased smoke production over existing fires.

Overall, expect air quality impacts to range from [MODERATE](#) to [UNHEALTHY](#) across the state with the worst impacts occurring in western and northeastern Montana. We may start to see improvement as we move towards the weekend and a wind shift moves the smoke away from Montana.

### Today's Summary

Smoke impacts are now occurring in western Montana due to smoke from the Pacific Northwest and British Columbia. Additionally, the fires in central Canada continue to bring waves of decreased visibility and poor air quality to northeast Montana. Conditions are expected to linger today as smoke, currently visible on satellite, may move in from the north and west. Conditions may start to improve as we move towards the weekend and winds aloft shift to the southwest. However, given the intensity of the fire activity so far this season, smoke impacts are likely to persist intermittently for the foreseeable future.

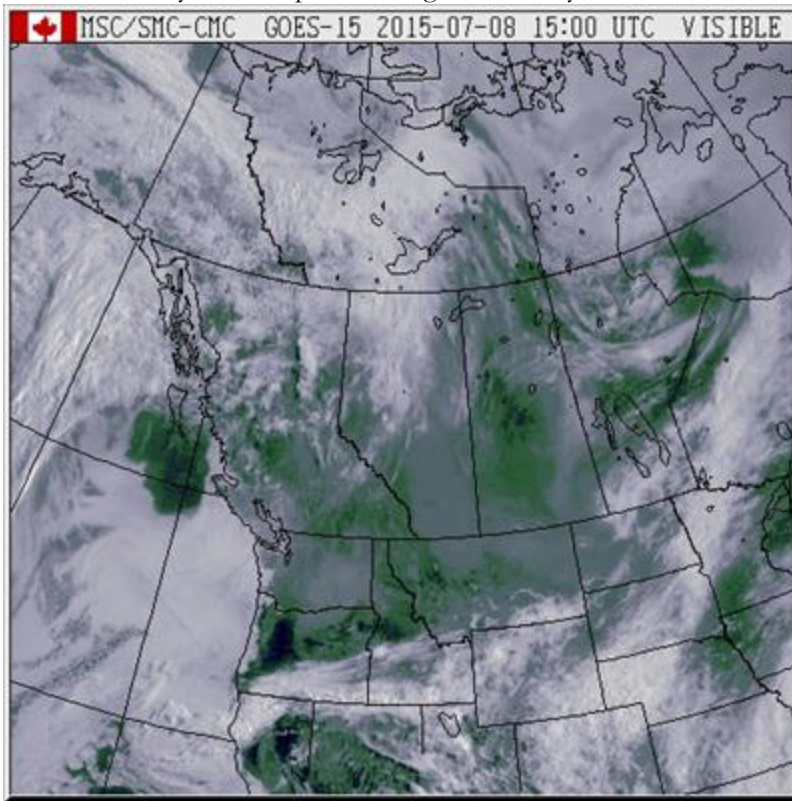
There are hazy skies in Glacier this morning as smoke from the Pacific Northwest impacts the area.



Source: [NPS](#)

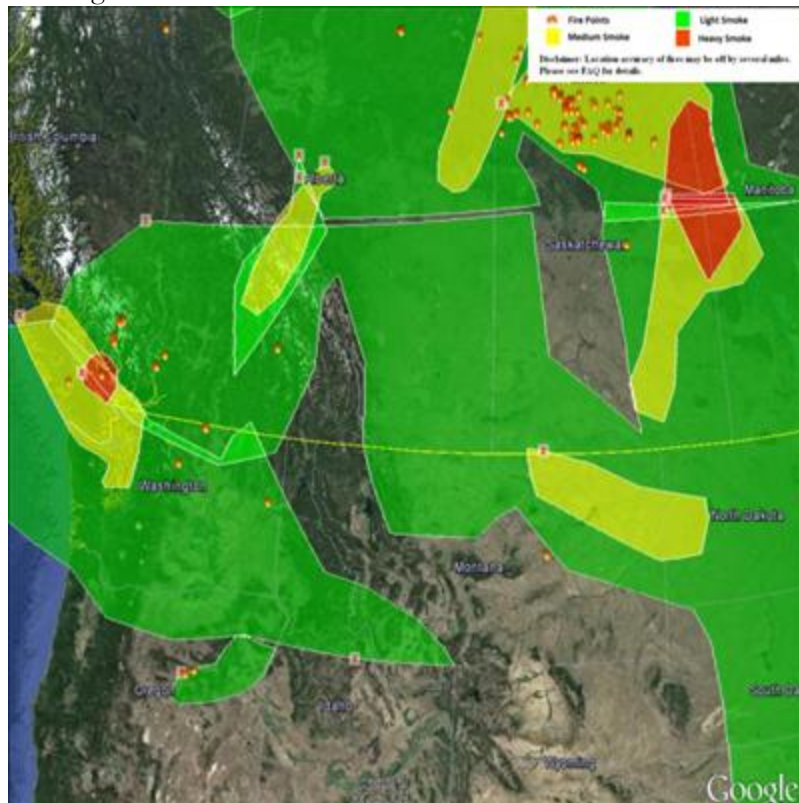


Earlier today, smoke is clearly visible on satellite across Montana. The plumes of smoke to the north and west of Montana may cause impacts throughout the day.



Source: [Canada Weather](#)

Satellite analysis shows smoke in many parts of the state and more moving in from Washington this morning.



Source: [NOAA](#)



The current active fire map shows the numerous large fires in Washington today. These fires, and others in British Columbia, are causing the hazy skies over most of Montana, with central Canadian fires causing impacts in northeast Montana.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	
	<a href="#">Unhealthy</a>	Sidney
	<a href="#">Unhealthy for Sensitive Groups</a>	Libby Flathead Seeley Lake Frenchtown Lewistown Malta Broadus
	<a href="#">Moderate</a>	Great Falls Missoula Helena Butte

	Billings
<a href="#">Good</a>	Hamilton Bozeman West Yellowstone Birney

### NOAA Text Description:

#### DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 0300Z July 8, 2015

##### SMOKE:

##### Northern Alaska:

An area of light density remnant smoke was seen in northern Alaska moving west into the Chukcki Sea ahead of abundant cloud cover over most of Alaska. This area of remnant smoke originated from wildfires in central Alaska the last few days.

##### Canada/Pacific Northwest/Northern Plains/Great Lakes:

An area of light to moderate remnant smoke was observed over British Columbia moving to the southeast into Alberta with a stream of moderate smoke moving through southern Alberta into southern Saskatchewan. Wildfires in southeastern Yukon, northern and central British Columbia contributed to this area of smoke which has also merged with light to moderate density smoke over the Pacific Northwest that was produced from wildfires in southern British Columbia. From this smoke in the Pacific Northwest, a band of moderate smoke extended eastward through Montana, the Dakotas, northern Minnesota, and northern Wisconsin. Heavy smoke was seen over central Saskatchewan moving south towards the North Dakota border where it has met up with an area of moderate remnant smoke produced from wildfires in British Columbia. Light density smoke was observed over most of the Central Plains and Great Lakes regions where areas were not obscured by clouds. Dense smoke produced from wildfires in central Saskatchewan yesterday was seen ahead of a frontal boundary in central Manitoba and the northwestern border of Ontario moving eastward. Another area of light density smoke was seen over Ontario and Hudson Bay and probably extended further east into eastern Quebec where smoke was observed in the Gulf of St. Lawrence although clouds from a large storm system reduced any chance for an observation of smoke in Quebec.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015G080320.html>

#### DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1600Z July 8, 2015

##### SMOKE:

##### Alaska/Yukon:

An area of light density remnant smoke was seen in central Alaska moving east into Yukon ahead of abundant cloud cover over most of Alaska and Yukon. This area of remnant smoke originated from wildfires in central Alaska the last few days.

##### Canada/Pacific Northwest/Northern Plains/Great Lakes:

An area of light to moderate remnant smoke from the wildfires in southwest British Columbia was observed over British Columbia (including Vancouver Island) moving southeast into Washington, northern Oregon and northern Idaho. Smoke from the fires in southeast Yukon and from northern British Columbia to northern Saskatchewan covered northeast British Columbia, most of Alberta, Saskatchewan and southern Manitoba. Light density smoke was observed over most of the Northern Plains and Great Lakes regions where areas were not obscured by clouds. A band of moderate smoke extended eastward through North Dakota and eastern Minnesota. Heavy smoke was seen over central Saskatchewan moving south towards central Manitoba. Another area of light to heavy density smoke was seen over west central to northwest

Quebec east of Hudson Bay although clouds from a large storm system reduced any chance of further observation.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015G081757.html>

## Summary of Exceptional Events

Date	Site	24-hr PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )	Reason
<a href="#">8/2/2015</a>	Libby	41.6	The Wolverine fire in Washington State sent smoke into western Montana. A handful of fires in southeast Montana caused impacts in Birney and Broadus.
<a href="#">8/3/2015</a> And <a href="#">PM Update</a>	Libby	63.7	Smoke moved into the state from numerous large fires in Washington, Oregon, and Northern California as a ridge of high pressure trapped smoke over Montana. The higher concentrations in Libby are due to the Wolverine Creek fire in Washington State
<a href="#">8/15/2015</a> And <a href="#">PM Update</a>	Butte Frenchtown Hamilton Helena Lewistown Missoula NCore	65.4 38.6 99.8 48.7 40.1 60.9 49.4	New fires ignited throughout central Idaho and western Montana due to strong winds and frequent lightning after a week of hot, dry weather. Nine new large fires were reported in the Northern Rockies and eight new large fires were reported in the Pacific Northwest. The largest new fire in Montana was the Eustice Fire north of Three Forks. Other large new fires in Montana include the Melton fire near Dillon, the Scotchmans Gulch Fire near Philipsburg, the Trail Creek Fire near Swan Lake, and the Klatawa fire near Libby at 156 acres. Fire activity also increased significantly on existing fires in Montana including the Sucker Creek Fire near Lincoln, the Marston fire near Eureka, and the Weigel fire near Libby. Fires in Idaho also contributed to the widespread smoke impacts.
<a href="#">8/16/2015</a> And <a href="#">PM Update</a>	Hamilton	44	Extensive fire activity throughout central Idaho and western Montana caused smoke impacts throughout Montana. A large plume of smoke originated from the Clearwater Complex fire in Idaho. In addition to this fire, 15 new large incidents were reported in Idaho and Montana due to the thunderstorm activity on Friday evening.
<a href="#">8/17/2015</a> And <a href="#">PM Update</a>	Hamilton	46.2	Smoke impacts were caused by 12 large fires burning in Montana and 8 large fires in Idaho. In addition, 40 new small fires were reported across Idaho and Montana.
<a href="#">8/18/2015</a> And <a href="#">PM Update</a>	Hamilton	69.2	Smoke impacts were limited to areas close to the Idaho/Montana border due to fire activity in Washington and Idaho. Elsewhere in the state, smoke impacts were kept to a minimum.
<a href="#">8/19/2015</a>	Butte	44.1	Satellite imagery confirms significant smoke

Date	Site	24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Reason
And <a href="#">PM Update</a>	Flathead* Frenchtown Hamilton Libby	41.4 42.1 90.9 51.1	spreading across Montana from Idaho and Washington. Fire activity in Montana has also increased, leading to widespread significant smoke impacts by late afternoon.
<a href="#">8/20/2015</a> And <a href="#">PM Update</a>	Birney Broadus Butte Flathead* Frenchtown Hamilton Helena Lewistown Libby Missoula NCore	39 43.6 82.8 106.5 67.7 125.4 79.6 74.1 80.4 68 63.1	Satellite imagery showed a river of smoke from eastern Washington moving up into Canada and then down along western Montana in the morning, moving to the east throughout the day. Westerly winds and generally dry conditions caused smoke to impact the region throughout the day.
<a href="#">8/21/2015</a> And <a href="#">PM Update</a>	Birney Broadus Butte Flathead* Frenchtown Hamilton Helena Lewistown Libby Missoula NCore	52.2 47.5 58.4 73.7 53.3 147.4 66 78.6 49 67.8 62.9	Active fires in Washington, Idaho, and Montana continued to cause elevated smoke levels across Montana.
<a href="#">8/22/2015</a> And <a href="#">PM Update</a>	Hamilton	49.1	After a brief reprieve in smoke impacts due to a cold front moving through the state, smoke moved back into western Montana in the evening. Smoke still lingered in eastern Montana as the cold front moved across the state.
<a href="#">8/23/2015</a>	Butte Flathead* Frenchtown Hamilton Libby Missoula	41.8 95.4 44.2 58.6 40.2 41.9	Smoke continued to move into western Montana from fire activity in Washington, Idaho, and Montana. Conditions worsened throughout the day.
<a href="#">8/24/2015</a> And	Flathead* Frenchtown	111.2 82.8	Prolonged smoke impacts expected due to a large ridge of high pressure over the western



Date	Site	24-hr PM <sub>2.5</sub> (µg/m³)	Reason
<a href="#">PM Update</a>	Hamilton Helena Libby Missoula NCore	58.9 51.7 165 74.9 52.3	U.S. and significant fire activity in Montana and neighboring states.
<a href="#">8/25/2015</a> And <a href="#">PM Update</a>	Butte Flathead* Frenchtown Hamilton Helena Lewistown Libby Malta Missoula NCore	56 85.7 90.6 121.3 67.6 49.3 89.1 38.6 86.4 61.3	Satellite imagery shows a large amount of smoke over almost all of Montana. This smoke is being trapped under a ridge of high pressure that impacted the area until August 30, 2015. Westerly winds aloft continue to carry smoke into the region from the numerous fires burning in western Montana, Idaho, and eastern Washington.
<a href="#">8/26/2015</a> And <a href="#">PM Update</a>	Flathead* Frenchtown Hamilton Helena Lewistown Libby Malta Missoula NCore	91.1 64.7 101.6 50.6 47.8 78.7 56.6 66.8 48.4	
<a href="#">8/27/2015</a> And <a href="#">PM Update</a>	Flathead* Frenchtown Hamilton Helena Lewistown Libby Missoula NCore	104.4 85.5 136.6 50.1 48.5 88.5 73.5 35.5	
<a href="#">8/28/2015</a> And <a href="#">PM Update</a>	Birney Broadus Butte Flathead* Frenchtown Helena	62 82.7 85.3 97.7 133.7 82.1	

Date	Site	24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Reason
	Lewistown	51.6	
	Libby	63.6	
	Malta	75	
	Missoula	126.4	
	NCore	67.7	
	Sidney	62.5	
<a href="#">8/29/2015</a>	Birney	46	
	Broadus	46.5	
	Butte	89.3	
	Flathead*	77.6	
	Frenchtown	124.7	
	Hamilton	196.8	
	Helena	94.2	
	Lewistown	58.5	
	Libby	59.6	
	Malta	97.3	
	Missoula	132.4	
	NCore	85.4	
	Sidney	75.9	
<a href="#">8/30/2015</a>	Broadus	35.6	
	Frenchtown	38.8	
	Hamilton	62.8	
	Helena	54.9	
	Missoula	35.7	
	NCore	39.8	

\* The 'Flathead' monitor refers to the PM<sub>2.5</sub> monitor located in Columbia Falls, MT. When referenced in wildfire smoke updates, and in this document, it is called Flathead to match the label on the Montana DEQ Today's Air Website.

Date	Site	24 Hour PM <sub>10</sub> µg/m <sup>3</sup>	Reason
<a href="#">8/14/2015</a> And <a href="#">PM Update</a>	Thompson Falls	105	Eight fires larger than 100 acres burned in Montana along with numerous other small fires throughout the western part of the state. Smoke was clearly visible on satellite imagery throughout the day. Satellite imagery indicated numerous smoke plumes in northwest Montana and Idaho and widespread smoke over eastern Montana.
<a href="#">8/15/2015</a> And <a href="#">PM Update</a>	Butte Missoula	100 133	New fires ignited throughout central Idaho and western Montana due to strong winds and frequent lightning after a week of hot, dry weather. Nine new large fires were reported in the Northern Rockies and eight new large fires were reported in the Pacific Northwest. The largest new fire in Montana was the Eustice Fire north of Three Forks. Other large new fires in Montana include the Melton fire near Dillon, the Scotchmans Gulch Fire near Philipsburg, the Trail Creek Fire near Swan Lake, and the Klatawa fire near Libby at 156 acres. Fire activity also increased significantly on existing fires in Montana including the Sucker Creek Fire near Lincoln, the Marston fire near Eureka, and the Weigel fire near Libby. Fires in Idaho also contributed to the widespread smoke impacts.
<a href="#">8/20/2015</a> And <a href="#">PM Update</a>	Butte Columbia Falls Kalispell Libby Whitefish Missoula	103 140 125 113 128 101	Satellite imagery showed a river of smoke from eastern Washington moving up into Canada and then down along western Montana in the morning, moving to the east throughout the day. Westerly winds and generally dry conditions caused smoke to impact the region throughout the day.
<a href="#">8/21/2015</a> And <a href="#">PM Update</a>	Columbia Falls Kalispell Whitefish Missoula	112 103 131 116	Active fires in Washington, Idaho, and Montana continued to cause elevated smoke levels across Montana.
<a href="#">8/23/2015</a>	Columbia Falls	112	Smoke continued to move into western Montana from fire activity in Washington, Idaho, and Montana. Conditions worsened throughout the day.
<a href="#">8/24/2015</a> And <a href="#">PM Update</a>	Columbia Falls Kalispell Libby	138 139 180	Prolonged smoke impacts expected due to a large ridge of high pressure over the western U.S. and significant fire activity in Montana and neighboring states.

Date	Site	24 Hour PM <sub>10</sub> µg/m <sup>3</sup>	Reason
	Thompson Falls	117	Satellite imagery shows a large amount of smoke over almost all of Montana. This smoke is being trapped under a ridge of high pressure that impacted the area until August 30, 2015. Westerly winds aloft continue to carry smoke into the region from the numerous fires burning in western Montana, Idaho, and eastern Washington.
	Whitefish	122	
	Missoula	104	
<a href="#">8/25/2015</a> And <a href="#">PM Update</a>	Columbia Falls	109	
	Libby	102	
	Whitefish	106	
	Missoula	120	
<a href="#">8/26/2015</a> And <a href="#">PM Update</a>	Columbia Falls	112	
	Kalispell	125	
	Thompson Falls	135	
	Missoula	104	
<a href="#">8/27/2015</a> And <a href="#">PM Update</a>	Columbia Falls	136	
	Kalispell	123	
	Libby	109	
	Thompson Falls	122	
	Whitefish	118	
	Missoula	119	
<a href="#">8/28/2015</a> And <a href="#">PM Update</a>	Butte10	115	
	Columbia Falls	135	
	Kalispell	133	
	Whitefish	110	
	Missoula	181	
<a href="#">8/29/2015</a>	Butte	118	
	Columbia Falls	138	
	Kalispell	146	
	Libby	143	
	Thompson Falls	143	
	Whitefish	104	
	Missoula	276	

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AUGUST 2, 2015

**PM2.5 Location(s):** Libby

**Synopsis:** The Wolverine fire in Washington State sent smoke into western Montana. A handful of fires in southeast Montana caused impacts in Birney and Broadus.

**Documentation:**

***Wildfire Smoke Update for Sunday, August 2, 2015 12:08 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=934>

**Today's Report and Forecast**

Skies remain hazy in most locations today as smoke from fires along the west coast continue to impact the area. In most locations this smoke is not reaching the ground level, except in southeast Montana, where 24 hour average concentrations are currently [UNHEALTHY FOR SENSITIVE GROUPS](#) in Birney and [MODERATE](#) in Broadus. This is likely caused in part by fire activity in that area. The biggest contributor of the widespread smoke appears to be the Wolverine fire in Washington, which is currently over 11,000 acres and 0% contained. In addition, numerous fires in Northern California and Oregon are producing smoke that is getting trapped under the large area of high pressure over the state. Lastly, the fires here in Montana are being impacted by the extremely dry conditions. The Reynolds Creek fire is reporting active fire behavior and the St. Mary Visitor Center webcam is showing periods of moderate to dense smoke. Some of this haze is likely caused by transported smoke from Washington along with smoke from the fire.

The high pressure system will continue to bring hot and dry conditions to the area today and tomorrow. Throughout this period, the hazy skies are expected to continue with the possibility of ground level impacts reaching [UNHEALTHY FOR SENSITIVE GROUPS](#). Beginning Monday night, a few disturbances will move through the ridge, bringing an increased chance of afternoon thunderstorms for most of the week. This more active weather may help clear out smoke from some areas, while also increasing the risk of new fires here in Montana. We will likely continue to see smoke impacts across the state both from fires in Montana and along the west coast as any shift in winds will likely keep Montana downwind of an active fire.

**Today's Summary**

While skies remain hazy across the state, this smoke has not reached the ground level in most locations. There are some impacts in southeast Montana, where concentrations have reached [UNHEALTHY FOR SENSITIVE GROUPS](#). We are also seeing increased smoke impacts near the Reynolds Creek Fire this morning, likely due to a combination of transported smoke and increased activity on the fire. The hazy skies and possible impacts are expected to continue through Monday. Beginning Monday evening, we may see an increase in thunderstorm activity each afternoon. This activity will likely bring intermittent improvement to some areas while increasing the risk of new fires in the state.

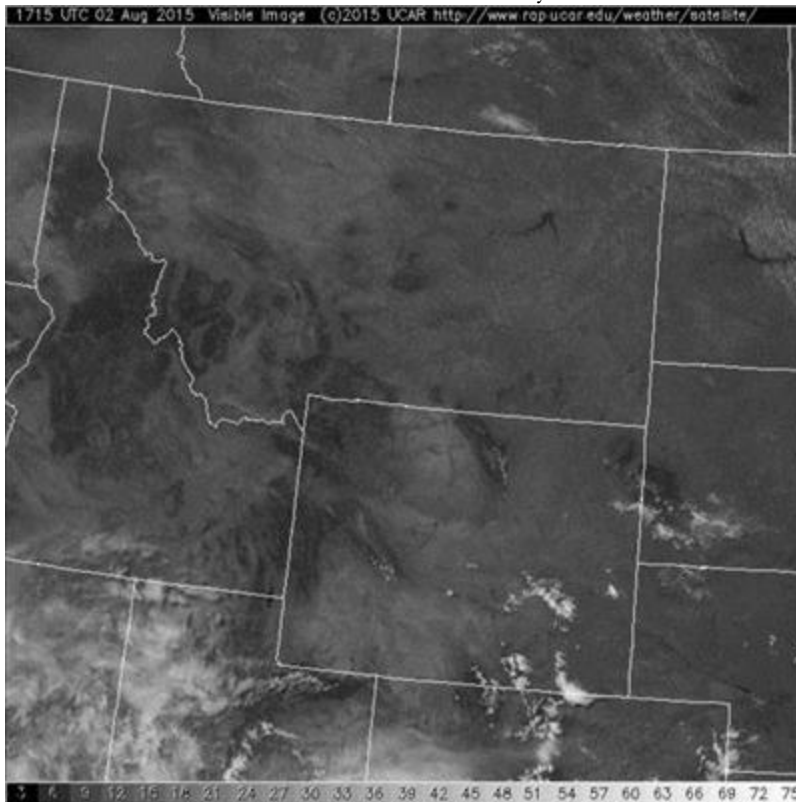


Smoke impacts near the Reynolds Creek Fire have increased today, likely due to increased fire activity yesterday and transported smoke from Washington.



Source: [NPS](#)

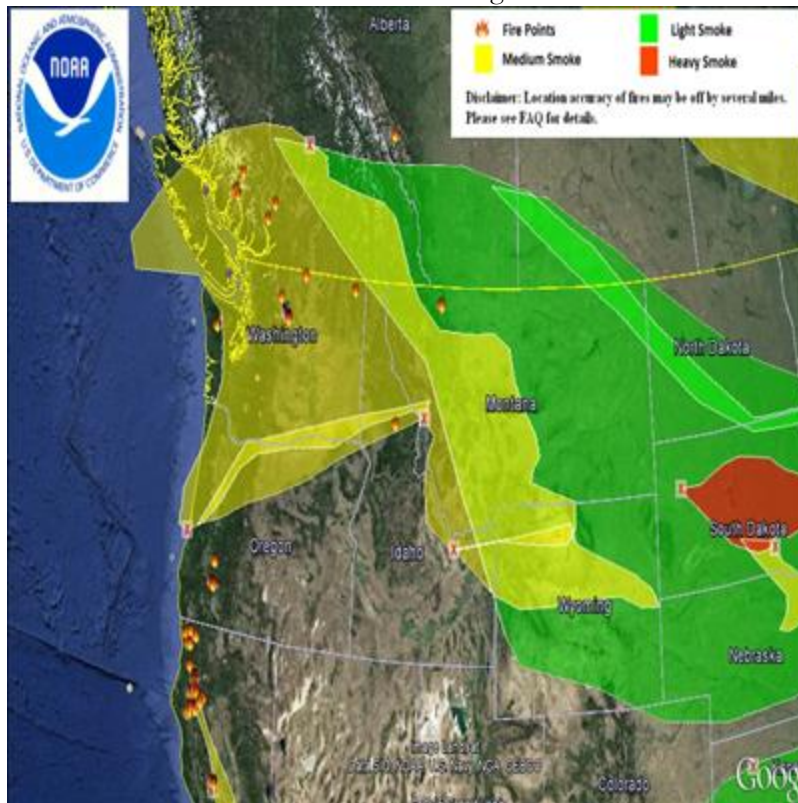
There are cloudless skies across Montana today as smoke has moved in to the state from more distance fires.



Source: [UCAR](#)



Smoke was detected across the entire state on satellite analysis today, with moderate smoke over western Montana. This smoke has not reached the ground level in most locations.



Source: [NOAA](https://www.noaa.gov)

Fire activity continues to increase along the west coast, which will likely cause smoke impacts in Montana for some time.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	
<a href="#">Unhealthy for Sensitive Groups</a>	Birney
<a href="#">Moderate</a>	Broadus
<a href="#">Good</a>	All other reporting sites.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1800Z August 2, 2015

From Earlier:

SMOKE

Alaska and Western/Central Canada:

An area of light to medium density smoke generated from Alaskan wildfires was visible moving east from central Alaska through Yukon, and into the Northwest Territories. A detached area of medium density remnant smoke was seen stretching from Nunavut and the northern portions of the Northwest Territories SE into Alberta, Saskatchewan, Manitoba, and Ontario. Another detachment of light density smoke is visible in the Bay of Alaska off the coast, from the wildfires burning from the north. This remnant smoke originates from the wildfires continuing to burn in central Alaska. Although clouds moving southwest into northwestern/central Alaska began to cover wildfire activity in central Alaskan.

#### Western/Central US:

Multiple areas of light to heavy density smoke is visible throughout the western and central US this morning. Heavy density smoke is visible moving east through South Dakota. Medium-density smoke is visible moving north from northern California and Oregon, Washington, and as far north as British Columbia where it moves east through Idaho, Montana, Wyoming, Nebraska, and Iowa. Light density remnant smoke is visible from the Pacific NW all the way east through the Midwest, where it is heading towards the Atlantic, but due to the limitations of GOES-W in the morning, it is difficult to determine these boundaries. A separate area of light density smoke is visible detaching from the west and moving SE into the Southern Plains, affecting Kansas, Oklahoma, Texas, Missouri, Arkansas, and Louisiana. This remnant smoke originates from the numerous wildfires that are burning in northern/central California, SW Oregon, Washington and British Columbia.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H021752.html>

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AUGUST 3, 2015

#### PM2.5 Location(s): Libby

**Synopsis:** Smoke moved into the state from numerous large fires in Washington, Oregon, and Northern California as a ridge of high pressure trapped smoke over Montana. The higher concentrations in Libby are due to the Wolverine Creek Fire in Washington State

#### Documentation:

*Wildfire Smoke Update for Monday, August 3, 2015 9:07 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=935>

#### Today's Report and Forecast

An **AIR QUALITY ALERT** has been issued for Lincoln County until 4pm MDT due to elevated particulate concentrations. Air quality in Libby is currently **UNHEALTHY**. State and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion. Another update will be posted at 4PM MDT.

The haze that was over the state throughout the weekend made its way down to the ground level in western Montana beginning yesterday evening. Particulate concentrations rapidly increased in many locations. The most significant impacts are in Lincoln County, where 24 hour average concentrations are currently **UNHEALTHY**. Elsewhere, 24 hour average concentrations are currently **UNHEALTHY FOR SENSITIVE GROUPS** in Flathead Valley, Seeley Lake, and Missoula, and **MODERATE** in Frenchtown, Helena, and Butte. Levels are also elevated to **MODERATE** in Broadus due to transported smoke and local fires.

Widespread smoke is visible on satellite this morning covering much of Montana. The smoke is originating from numerous large fires in Washington, Oregon, and Northern California as the ridge of high pressure is carrying smoke into Montana and trapping it under the stagnant air mass. The higher concentrations in



Lincoln County are likely due to the Wolverine Creek fire in Washington State, which is currently burning with extreme fire behavior and has consumed 16,000 acres.

A cold front is expected to move through the state later today as a low pressure system over British Columbia slowly moves eastward. The increase in winds, associated with the front, is expected to move in early this evening, hopefully decreasing smoke impacts in Libby and moving eastward overnight.

In the meantime, dense smoke and air quality ranging from [MODERATE](#) to [UNHEALTHY](#) is expected in western Montana, with the worst impacts located in northwest Montana. We may see improvement this evening in some locations. **Another update will be posted at 4pm today with a forecast for the remainder of the week and a closer look at the fire activity on the west coast that is causing all this smoke.**

#### Today's Summary

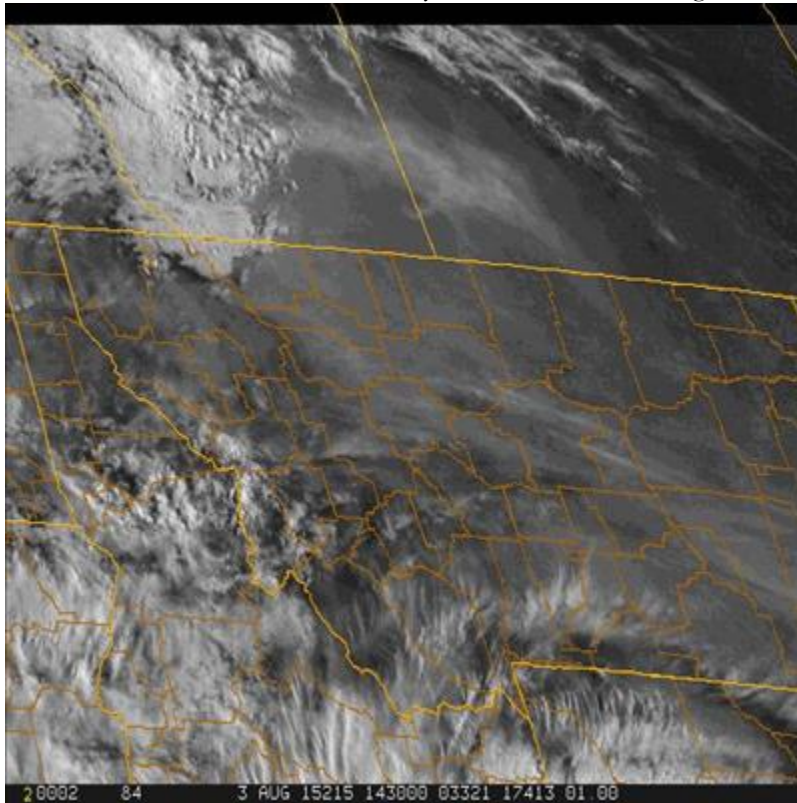
**AIR QUALITY ALERT issued for Lincoln County today due to measured concentrations reaching [UNHEALTHY](#) levels in Libby, MT.** Widespread smoke impacts ranging from [MODERATE](#) to [UNHEALTHY FOR SENSITIVE GROUPS](#) is present across much western Montana. Increasing winds this evening may help mitigate some of these impacts. **Another update will be posted at 4pm with a complete forecast.**

The smoke from Washington State has substantially reduced visibility in Glacier National Park. While some of this smoke is from the Reynolds Creek Fire, most is caused by transported smoke into the region.



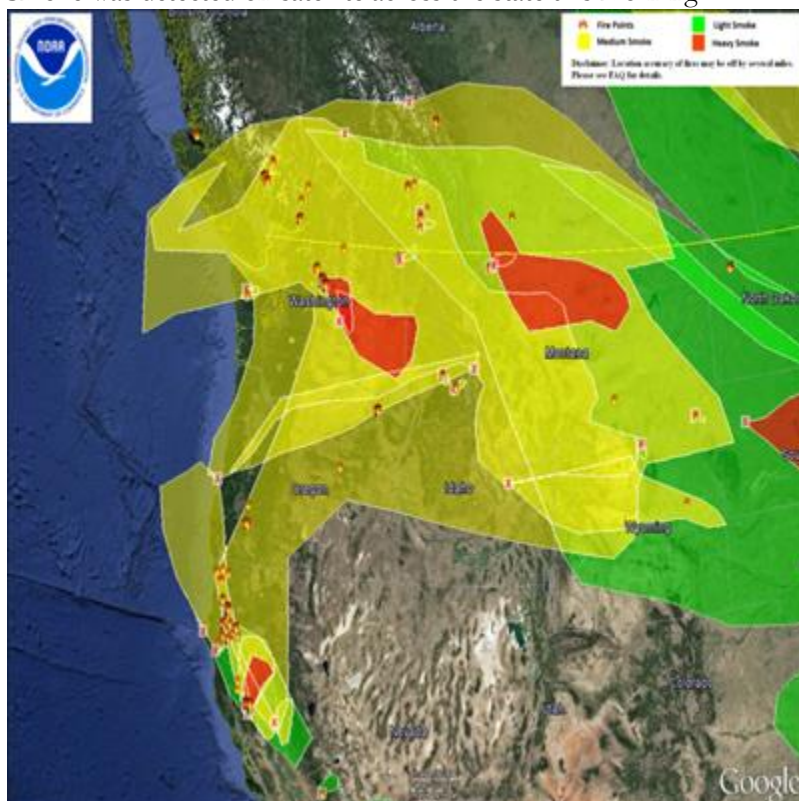
Source: [NPS](#)

Smoke is visible across the state today due to fires in Washington, Oregon, and Northern California.









Source: [NOAA](#)

Smoke was detected on satellite across the state this morning.



Source: [NOAA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	
	<a href="#">Unhealthy</a>	Libby
	<a href="#">Unhealthy for Sensitive Groups</a>	Flathead Valley Seeley Lake Missoula
	<a href="#">Moderate</a>	Frenchtown Helena Butte Broadus
	<a href="#">Good</a>	

### *Wildfire Smoke Update for Monday, August 3, 2015 4:04 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=936>

#### **Today's Report and Forecast**

An **AIR QUALITY ALERT** has been issued for Lincoln County until 9AM MDT August 4, 2015 due to elevated particulate concentrations. Air quality in Libby is currently **UNHEALTHY**. State and Local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion. Another update will be posted at 9AM MDT on August 4, 2015.

Air quality impacts continue across western Montana today as fires in Washington, Oregon, and Northern California continue to send smoke into the state. The most significant impacts continue to be in Northwest Montana, where 24-hour average air quality remains **UNHEALTHY** in Libby. Elsewhere, 24-hour average air quality is **UNHEALTHY FOR SENSITIVE GROUPS** in Flathead Valley, Missoula, Seeley Lake, and Frenchtown, and **MODERATE** in Helena, Butte and Broadus. The monitor in Hamilton was down until earlier this morning but measurements taken since then indicate average air quality in the Bitterroot is likely **UNHEALTHY FOR SENSITIVE GROUPS**. In Eastern Montana, skies are hazy but so far air quality remains good as the smoke has stayed aloft in most places.

The main contributor to this smoke is likely the Wolverine **Fire** in Washington State. This fire has been displaying extreme fire behavior has been producing a large amount of smoke on satellite for the past few days. The fire is under a red flag warning today so additional smoke impacts are likely. Smoke is also visible across much of Oregon, Idaho, and Northern California today from large, active fires burning across the west. This smoke is likely also contributing to the widespread smoke under the ridge of high pressure that has impacted our area for about a week. Here in Montana, the Reynolds Creek **fire** is nearing in on 4,000 acres and 67% containment. Smoke impacts in Glacier are mainly due to transported smoke from Washington.

Change is on the way tonight in the form of a cold front pushing through the state. This cold front is expected to swing through starting this evening and will bring breezy conditions to areas along the Idaho/Montana border first, and move eastward across the state. Prior to the cold front arriving, smoke impacts may worsen in some areas after nightfall as smoke may settle into the valleys. The breezy conditions will hopefully bring improvement to the smoke impacts. However, strong winds over the fires may increase smoke production and carry more smoke into the state. After the cold front moves through, a low pressure trough will make its way eastward across southern Canada through Friday. This may briefly redirect smoke from the Wolverine fire away from northwest Montana but usher in additional smoke from Idaho, Oregon, and California, especially into southwest Montana. Throughout this period there is a chance of afternoon thunderstorms.

Overall, expect air quality ranging from **MODERATE** to **VERY UNHEALTHY** to impact the area for the rest of today. We may see brief improvement overnight as a cold front moves through, but the possibility exists for the increased winds to carry additional smoke in to the state. The air quality alert for Lincoln County will remain in place overnight, as hourly concentrations have been trending upwards this afternoon. We will likely see intermittent smoke impacts throughout western Montana for the remainder of the week as smoke carried from active fires continues to move into the state.

#### **Today's Summary**

**AIR QUALITY ALERT** issued for Lincoln County today due to measured concentrations reaching **UNHEALTHY** levels in Libby, MT. Numerous fires burning in Washington, Idaho, Oregon, and Northern California are causing widespread hazy skies and smoke impacts across Montana today. The biggest driver of this smoke is the Wolverine fire in Washington. We may see some improvement overnight tonight as a cold front moves through the area, although this may usher in additional smoke due to increasing winds. A system moving through southern Canada this week may cause intermittent improvement, but smoke

impacts are likely throughout the week due to the large number of fires burning to the west and southwest of the state. Smoke impacts from fires within Montana are also likely throughout this period as breezy conditions continue to cause active fire behavior.

Hazy skies are visible overlooking the Swan Mountains this afternoon. Smoky conditions are visible across western Montana today due to transported smoke.



Source: [CMP Montana](#)

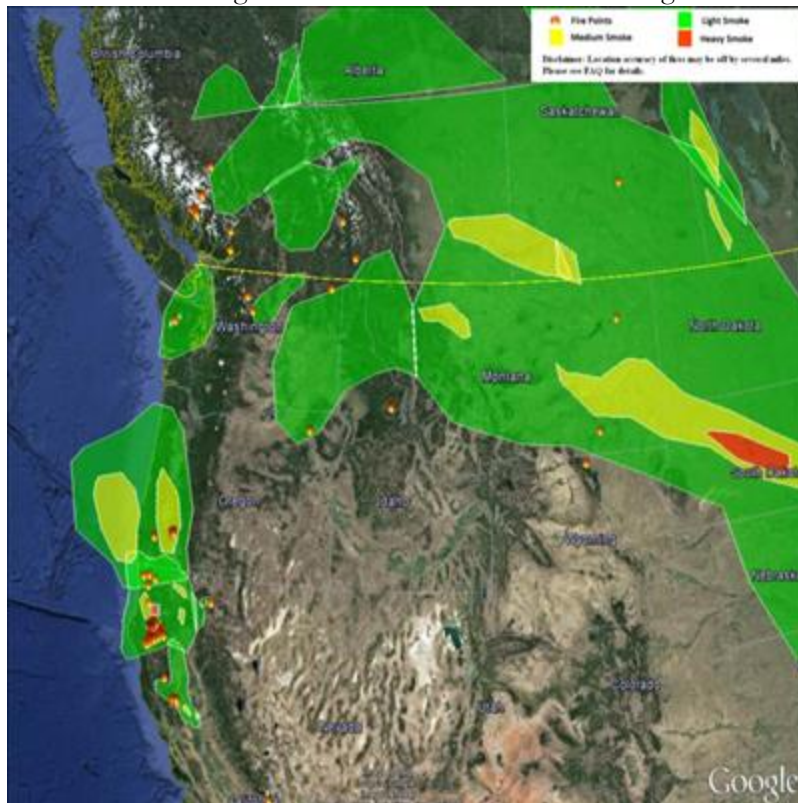


Smoke can be seen on satellite imagery across Montana, Idaho, Washington, Oregon, and Northern California. The dense smoke in Montana remains over far northwest Montana.



Source: [NASA](#)

The satellite analysis from today shows smoke over many areas of Montana. Additional smoke is not visible because of increasing cloud cover over Idaho and Washington.



Source: [NOAA](#)

Fire activity remains active along the west coast.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Libby
<a href="#">Unhealthy for Sensitive Groups</a>	Flathead Valley Missoula Frenchtown Seeley Lake Hamilton
<a href="#">Moderate</a>	Helena Butte Broadus
<a href="#">Good</a>	All other reporting sites.

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1830Z August 3, 2015

### SMOKE

Northwestern Canada/Central Canada/North Central and Central US:

Several areas of light to moderate density smoke are observed this morning from northwest Canada stretching southeastward across central parts of the country and into the northern US. Some of this area of smoke was generated by wildfires in central Alaska with the smoke now lingering over portions of Nunavut, the Northwest Territories, and the Yukon Territory. Additional fires burning near Great Slave Lake have produced a fresh area of moderately dense to dense smoke northwest of the lake. Remnant Alaskan smoke and smoke from fires burning in Northwest Territories/Saskatchewan has spread southeast towards the US where it merges with other smoke that is from US/southwest Canada fires and continues on to the Mid-Mississippi Valley and Great Lakes Region.

West Coast/Pacific Northwest/Southwest Canada/Central US:

Multiple areas of light to moderately dense smoke in between cloud cover over north California, the Pacific Northwest, British Columbia, and into the central US/Great Lakes Region was observed this morning. These areas of smoke originated from wildfires in north California, the Pacific Northwest, and southern British Columbia. A patch of very dense smoke was observed moving southeast across South Dakota. Light to moderate density smoke extended from the Pacific Northwest as far east as Indiana this morning and as far south as southern Arkansas.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H031837.html>

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AUGUST 14, 2015

**PM10 Location(s):** Thompson Falls

**Synopsis:** Eight fires larger than 100 acres burned in Montana along with numerous other small fires throughout the western part of the state. Smoke was clearly visible on satellite imagery throughout the day. Satellite imagery indicated numerous smoke plumes in northwest Montana and Idaho and widespread smoke over eastern Montana.

### Documentation:

***Wildfire Smoke Update for Friday, August 14, 2015 11:14 AM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=947>

### Today's Report and Forecast

Fire activity increased significantly yesterday across western Montana and the Pacific Northwest. Smoke is present across most of the state this morning with impacts reaching **UNHEALTHY FOR SENSITIVE GROUPS** in many western communities. 24-hour average air quality is currently **UNHEALTHY FOR SENSITIVE GROUPS** in Flathead Valley, Seeley Lake, Frenchtown, Great Falls, Broadus and Birney, and **MODERATE** in Libby, Missoula, Lewistown, Malta, Billings, and Sidney. Smoke impacts near active fires in Montana may reach **UNHEALTHY** levels and residents should use visibility guidelines to assess the air quality in their area. Southwest Montana has so far avoided much of the smoke impacts as winds have carried smoke to other parts of the state.

Yesterday was hot, dry, and breezy once again as a ridge of high pressure remained over the state. This created ideal fire weather to allow rapid growth on existing fires and many new fire starts. There are currently eight fires larger than 100 acres burning in Montana and numerous other small fires throughout the western part of the state. A recap of these fires can be found [here](#) and [here](#). The Sucker Creek [fire](#) in Lincoln grew

rapidly to 700 acres yesterday and prompted evacuations in the Copper Creek drainage.

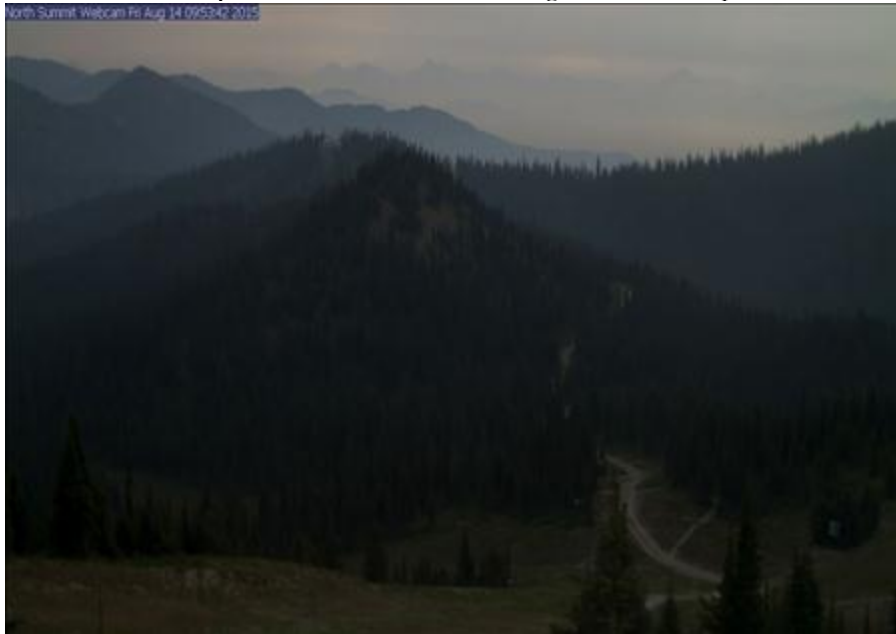
Satellite imagery from yesterday afternoon shows numerous smoke plumes in northwest Montana and Idaho and widespread smoke over eastern Montana. The fire activity is expected to further intensify today as temperatures remain hot, with increasingly gusty winds and scattered thunderstorms. A red flag [warning](#) has now been issued for the entire northern half of the state, northern Idaho, and eastern Washington. A cold front will move through from west to east overnight tonight, bringing continued gusty winds and thunderstorms. On Saturday, temperatures are expected to be much cooler, with winds from the west. Next week looks more active than this week, with another system moving through on Tuesday.

Smoke impacts will likely intensify today due to increased fire activity. Expect impacts ranging from [MODERATE](#) to [UNHEALTHY](#) across the state. Once the front passes, we may see improvement in many areas tomorrow as lower temperatures and possible precipitation helps to decrease fire activity. Smoke impacts on Sunday and early next week depend on the fire intensity of new and existing fires after the weather system moves through. Montana will be downwind of fires in Washington which have displayed large smoke columns the last few days. We will likely see most of the smoke impacts near local fires, with possible widespread moderate impacts from Washington.

### **Today's Summary**

Hazy skies and decreased air quality is present around the region today as numerous fires are producing smoke in and around Montana. Smoke impacts are expected to increase today as red flag conditions exist across the region. A change is on the way tonight in the form of a cold front. This will usher in some cooler weather which may help mitigate some of the more significant smoke impacts for the weekend. Next week looks a bit more active, with intermittent smoke impacts combined with occasional clearing.

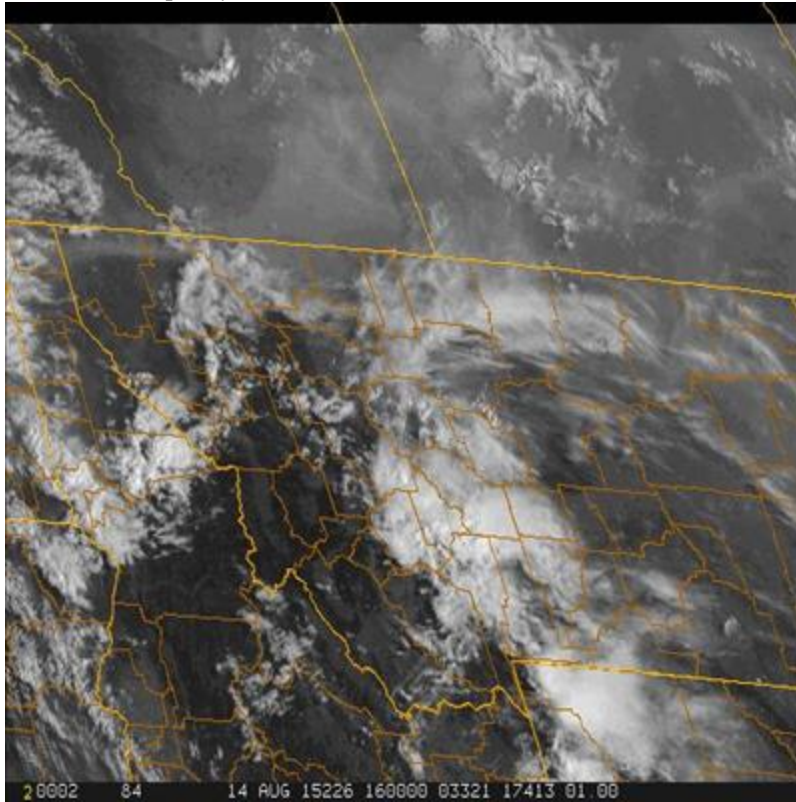
Conditions are hazy over Whitefish this morning and smoke is present across much of the state today.



Source: [Ski Whitefish](#)

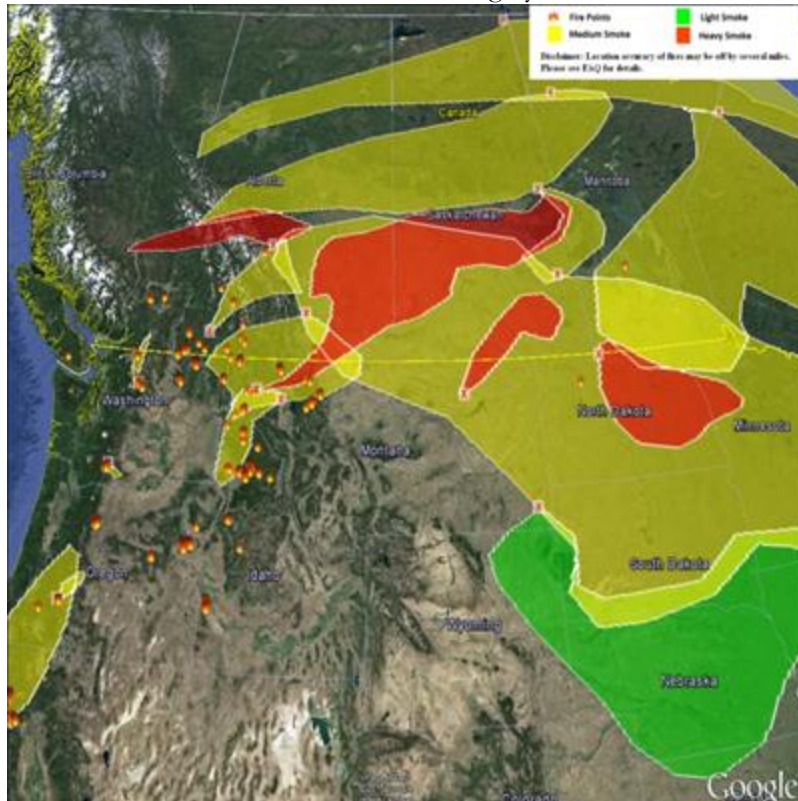


Smoke is visible across northwestern and eastern Montana today as numerous fires contribute to widespread decreased air quality.



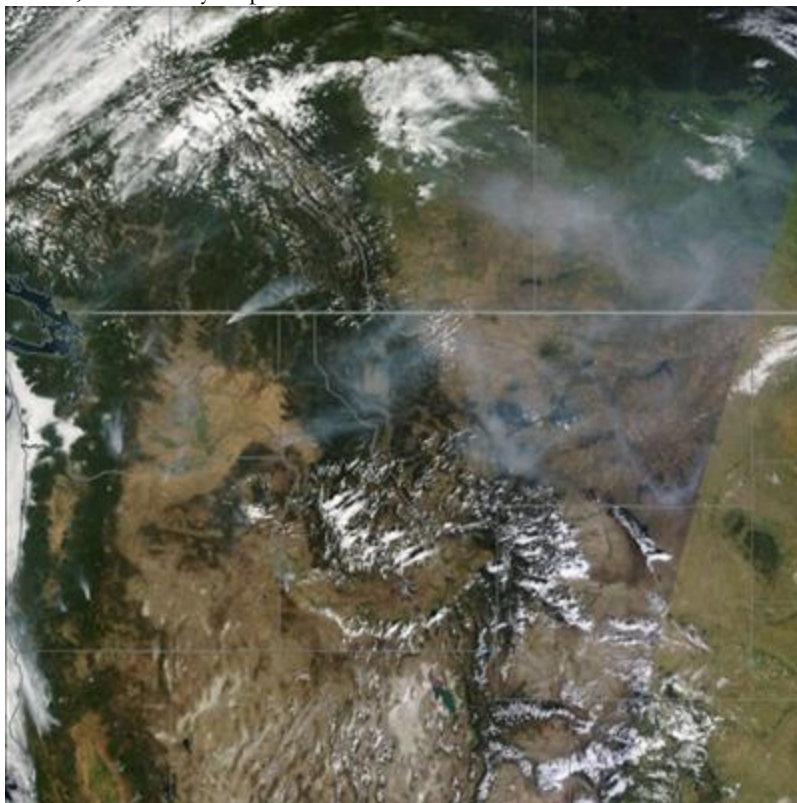
Source: [NWS](#)

Cloud cover is obscuring some of the detected smoke impacts today, but moderate smoke is visible across most of northern Montana on satellite imagery.



Source: [NOAA](#)

Yesterday's satellite imagery shows widespread smoke over the state. Large fires in Washington are also visible, which may impact Montana later in the weekend.



Source: [NASA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	
	<a href="#">Unhealthy</a>	
	<a href="#">Unhealthy for Sensitive Groups</a>	Flathead Valley Seeley Lake Frenchtown Great Falls Birney Broadus
	<a href="#">Moderate</a>	Libby Missoula Lewistown Malta Sidney Billings

<a href="#">Good</a>	Hamilton Helena Butte Bozeman
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### ***Wildfire Smoke Update for Friday, August 14, 2015 4:52 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=948>

#### **Today's Report and Forecast**

**Note:** The Today's Air site has two new dots on the map as of this afternoon. Two temporary monitors are being installed in St. Mary and Browning to monitor smoke impacts from the Thompson Fire in Glacier National Park. The monitors are expected to start reporting concentrations on Saturday.

Air quality has improved in some areas of the state today as the increasing southerly winds are helping to push smoke out of many communities. Hazy skies and smoke impacts are still prevalent in northern Montana due to the large number of fires burning. Air quality is currently [UNHEALTHY FOR SENSITIVE GROUPS](#) in Flathead Valley and [MODERATE](#) in Libby and Malta. 24-hour concentrations are still elevated but hourly concentrations have improved significantly in the Missoula area, Great Falls, Billings, Broadus, and Birney.

Thunderstorms are starting to pop up across western Montana, especially in the southwest. This may spark additional fires this afternoon. We have already seen a new 200 acre [fire](#) near Three Forks with a smoke plume moving north this afternoon. There are a few fires burning in the Libby area, including the Marston fire at 100 acres, the Dunn fire at 80 acres, and the Weigel fire at 120 acres. Significant smoke can be seen on satellite from these fires. Smoke from fires in Idaho and Washington are also adding to the haze in northwest Montana. The Stickpin fire, in north-central Washington, in particular is displaying an enormous amount of smoke on satellite this afternoon.

Fire activity is expected to remain high throughout the day. Northwest Montana will likely to see continued smoke impacts ranging from [MODERATE](#) to [UNHEALTHY](#), especially near active fires. Elsewhere in the state will likely see [GOOD](#) air quality, except in areas directly downwind of active fires, where air quality could reach [UNHEALTHY](#) levels. A cold front will move through this evening and shift winds to the west, possibly ushering in more smoke from the Washington area on Saturday afternoon and Sunday. Impacts near new or existing fires may linger for some time.

#### **Today's Summary**

Smoke impacts have improved in many areas of Montana, especially in the south and east. Smoke impacts are still widespread in the northern portion of the state due to numerous fires here in Montana and Idaho and Washington. Impacts are expected to continue throughout the day in northwest Montana. A cold front may bring temporary relief later this evening but impacts are expected near active fires for the foreseeable future.

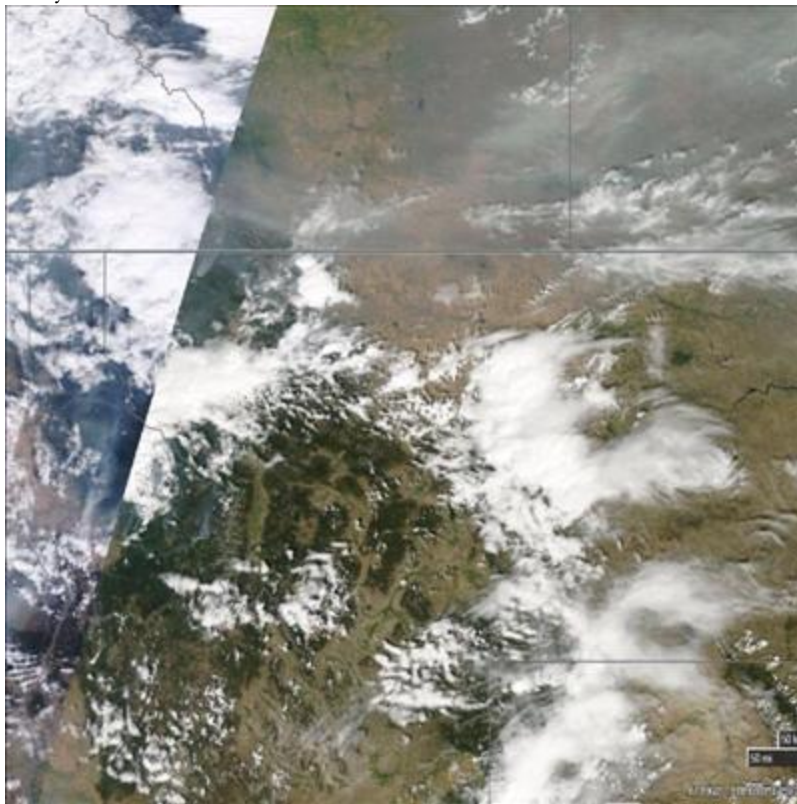


Some smoke is visible in Eureka this afternoon where a wildfire is burning nearby.



Source: [Weather Underground](#)

Smoke is clearing from southern Montana but widespread impacts are visible across northwest Montana today.



Source: [NASA](#)





Source: [NOAA](#)

Fire active remains high today across the west with numerous fires burning in northwest Montana.



Source: [USFS](http://usfs.gov)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	
<a href="#">Unhealthy for Sensitive Groups</a>	Flathead Valley
<a href="#">Moderate</a>	Libby Malta
<a href="#">Good</a>	Hourly levels have improved at all other locations, although 24 hour average values remain elevated.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1700Z August 14, 2015

## SMOKE:

### Western/Central Canada:

A large area of smoke is visible moving SE from the wildfires continuing to burn near the Slave Lake region as well as southern British Columbia. Medium density smoke is visible in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, and western Quebec. A separate plume of light density smoke is visible moving SE from the Chukchi Sea into the NW Territories and Nunavut. This smoke is remnant from the wildfires that have been burning in Canada the last few weeks.

### Western/Central US:

A large area of light to heavy density smoke is visible this morning traveling east from the multiple wildfire complexes located in California, Oregon, Idaho, Washington, British Columbia, and Montana. The heaviest smoke is visible in British Columbia, Montana, Alberta, Saskatchewan, North Dakota, and Minnesota. Medium-density smoke is visible in this region moving eastward into the Great Lakes and SE into the Mississippi Valley. Light-density smoke is visible moving south into the Southern Plains as far as Texas. Due to the visual limitations of GOES-W, it is difficult to determine how far east the boundaries of smoke are.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H141704.html>

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AUGUST 15, 2015

**PM2.5 Location(s):** Butte, Frenchtown, Hamilton, Helena, Lewistown, Missoula, Ncore

**PM10 Location(s):** Butte, Missoula

**Synopsis:** New fires ignited throughout central Idaho and western Montana due to strong winds and frequent lightning after a week of hot, dry weather. Nine new large fires were reported in the Northern Rockies and eight new large fires were reported in the Pacific Northwest. The largest new fire in Montana was the Eustice Fire north of Three Forks. Other large new fires in Montana include the Melton Fire near Dillion, the Scotchmans Gulch Fire near Philipsburg, the Trail Creek Fire near Swan Lake, and the Klatawa Fire near Libby at 156 acres. Fire activity also increased significantly on existing fires in Montana including the Sucker Creek Fire near Lincoln, the Marston Fire near Eureka, and the Weigel Fire near Libby. Fires in Idaho also contributed to the widespread smoke impacts.

### Documentation:

*Wildfire Smoke Update for Saturday, August 15, 2015 9:20 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=949>

### Today's Report and Forecast

An AIR QUALITY ALERT has been issued for Beaverhead, Deer Lodge, Granite, Jefferson, Lewis and Clark, Madison, Missoula, Powell, Ravalli, and Silver Bow Counties until 4pm MDT due to elevated particulate concentrations. Air quality in Hamilton is currently [VERY UNHEALTHY](#). Air quality in Missoula, Frenchtown, and Butte is currently [UNHEALTHY](#). Air quality in Libby and Flathead Valley is currently [UNHEALTHY FOR SENSITIVE GROUPS](#). Air quality in Seeley Lake is [MODERATE](#). Air quality in Helena is currently being reported as [GOOD](#) but thick haze is present across the Helena Valley and concentrations are anticipated to be [UNHEALTHY](#) above the valley floor.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged

exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

The strong westerly winds have brought in an enormous amount of smoke to southwest Montana this morning due to a rapid increase in fire activity in Idaho and Montana yesterday afternoon. Hourly concentrations and webcams in northwest Montana currently do not meet the threshold for an air quality alert. Another update will be posted at 4pm with a thorough discussion of the causes of the smoke and a forecast. Air quality alerts will be extended at that time if necessary.

### **Today's Summary**

An AIR QUALITY ALERT has been issued for Beaverhead, Deer Lodge, Granite, Jefferson, Lewis and Clark, Madison, Missoula, Powell, Ravalli, and Silver Bow Counties until 4pm MDT due to elevated particulate concentrations. Air quality in Hamilton is currently [VERY UNHEALTHY](#). Air quality in Missoula and Butte is currently [UNHEALTHY](#). Air quality in Frenchtown is currently [UNHEALTHY FOR SENSITIVE GROUPS](#). Air quality in Seeley Lake is [MODERATE](#). Air quality in Helena is currently being reported as [GOOD](#) but thick haze is present across the Helena Valley and concentrations are anticipated to be [UNHEALTHY](#) above the valley floor.

The strong westerly winds have brought in an enormous amount of smoke to southwest Montana this morning due to a rapid increase in fire activity in Idaho and Montana yesterday afternoon. Hourly concentrations and webcams in northwest Montana currently do not meet the threshold for an air quality alert. Another update will be posted at 4pm with a thorough discussion of the causes of the smoke and a forecast. Air quality alerts will be extended at that time if necessary.

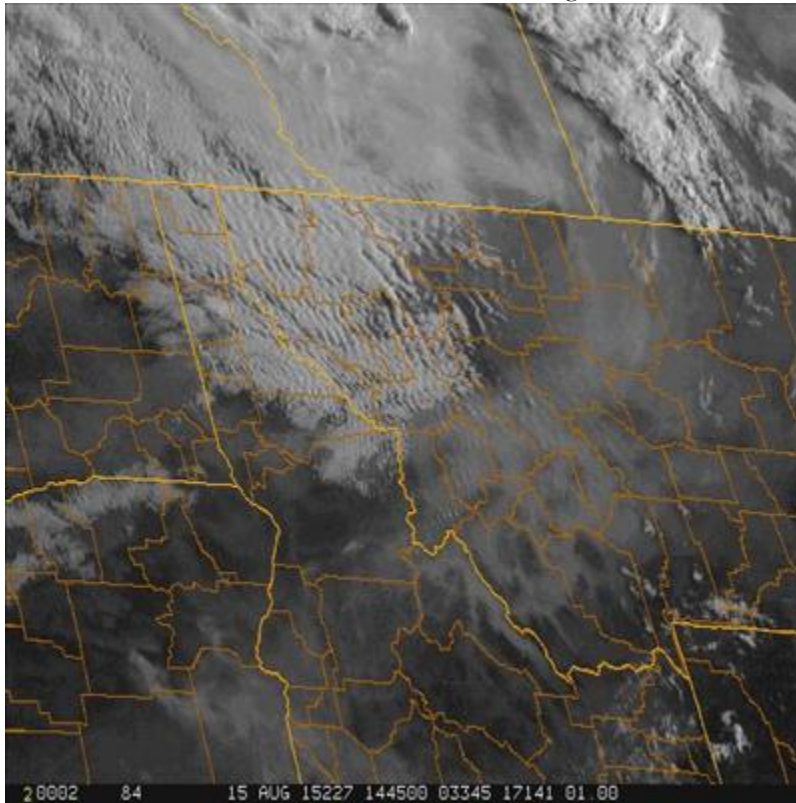
Air quality is [VERY UNHEALTHY](#) in Hamilton this morning due to smoke moving in from the west.



Source: [USFS](#)



Dense smoke can be seen on satellite this morning across southwest Montana.



Source: [NWS](#)

Numerous new large fires are being reported in Idaho and Montana today.



Source: [USFS](https://www.usfs.gov/)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	Hamilton
<a href="#">Unhealthy</a>	Missoula Frenchtown Butte Helena (based on observations, monitor is showing good values)
<a href="#">Unhealthy for Sensitive Groups</a>	Flathead Valley Libby
<a href="#">Moderate</a>	Seeley Lake Great Falls Sidney
<a href="#">Good</a>	All other reporting sites.

***Wildfire Smoke Update for Saturday, August 15, 2015 3:55 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=950>

**Today's Report and Forecast**

An air quality alert has been issued for the following counties until 9am, August 16th, 2015 due to elevated particulate concentrations: **Beaverhead, Broadwater, Cascade, Deer Lodge, Fergus, Flathead, Gallatin, Glacier, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Madison, Meagher, Mineral, Missoula, Park, Pondera, Powell, Ravalli, Sanders, Silver Bow, and Teton Counties.**

Air quality is currently [VERY UNHEALTHY](#) in Missoula, Hamilton, and Butte, [UNHEALTHY](#) in Libby Frenchtown, Helena, and Bozeman, [UNHEALTHY FOR SENSITIVE GROUPS](#) in St. Mary, Flathead Valley, Great Falls, Lewistown, and Seeley Lake, and [MODERATE](#) in Malta, Billings, and Sidney.

While some areas of northwest Montana have not exceeded the National Ambient Air Quality Standards (NAAQS), an air quality alert is being issued in these counties due to fluctuating air quality and visible smoke on satellite. The deteriorating air quality is making its way eastward due to the westerly winds moving across the state. While some areas of western Montana have seen improvement this afternoon, impacts are expected to persist through Monday morning. Another update will be posted at 9am, August 16th to update or cancel the air quality alert.

The temporary monitor in St. Mary is now reporting concentrations. There are just a few hours of data but concentrations are hovering around the [UNHEALTHY FOR SENSITIVE GROUPS](#) level. The monitor in Browning has had some technical difficulties and will hopefully be operating next week.

New fires ignited throughout central Idaho and western Montana yesterday due to strong winds and frequent lightning after a week of hot, dry weather. Nine new large fires were reported in the Northern Rockies and eight new large fires were reported in the Pacific Northwest. The largest new fire in Montana is the Eustice Fire north of Three Forks which grew to 6,000 acres since yesterday morning. Other large new fires in Montana include the Melton fire near Dillon at 2,600 acres, the Scotchmans Gulch Fire near Philipsburg at 350 acres, the Trail Creek Fire near Swan Lake at 2,000 acres, and the Klatawa fire near Libby at 156 acres. Fire activity also increased significantly on existing fires in Montana including the Sucker Creek Fire near Lincoln, which grew to 2,300 acres, the Marston fire near Eureka is now at 1,500 acres while the Weigel fire near Libby is holding steady at 100 acres. The Thompson Fire is now being reported at 13,202 acres due to more accurate mapping. There are many other smaller fires being reported around western Montana. The full extent of fires from the thunderstorms activity may not be fully known for another day or so.

Idaho also had numerous fire starts yesterday. The Army Mule fire is located to the west of Hamilton and is currently 2,200 acres. In addition, the Scotchman Peak fire located near Sandpoint is 650 acres, the Big Lost fire near Moscow, ID is 400 acres, and the Whitetail Peak fire near Coeur d'Alene is 100 acres. The Clearwater Complex in the Nez Perce-Clearwater National Forest is now over 32,000 acres. There was also an increase in fire activity in Washington yesterday.

All of these new fires and increased activity on existing fires has led to the large amount of smoke over Montana today. The frontal passage that moved through the state early this morning ushered in westerly winds, bringing Montana downwind of all these fires. These westerly winds are expected to persist through Monday. These dry and breezy conditions have prompted a red flag warning by the National Weather Service for areas east of the Divide to the North Dakota border. The dense plume of smoke is moving eastward, with concentrations improving a bit in western Montana and getting worse in central Montana this afternoon. We will likely see air quality deteriorate in eastern Montana as the day progresses. The red flag warning combined with expected westerly winds and the large number of fires in western Montana and Idaho means we will

likely see air quality impacts linger through at least Monday. A couple of disturbances are expected to move through on Sunday and Monday, which may help improve air quality in some locations. However, due to the extensive fire activity, we will likely see impacts persist for quite some time.

Air quality is expected to range from [MODERATE](#) to [VERY UNHEALTHY](#) across Montana today and tomorrow. The air quality alert will be reevaluated in the morning and updates will be issued at 9am.

#### Today's Summary

**An air quality alert has been issued for the following counties until 9am, August 16th, 2015 due to elevated particulate concentrations: Beaverhead, Broadwater, Cascade, Deer Lodge, Fergus, Flathead, Gallatin, Glacier, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Madison, Meagher, Mineral, Missoula, Park, Pondera, Powell, Ravalli, Sanders, Silver Bow, and Teton Counties.**

Air quality is currently [VERY UNHEALTHY](#) in Missoula, Hamilton, and Butte, [UNHEALTHY](#) in Libby Frenchtown, Helena, and Bozeman, [UNHEALTHY FOR SENSITIVE GROUPS](#) in St. Mary, Flathead Valley, Great Falls, Lewistown, and Seeley Lake, and [MODERATE](#) in Malta, Billings, and Sidney.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

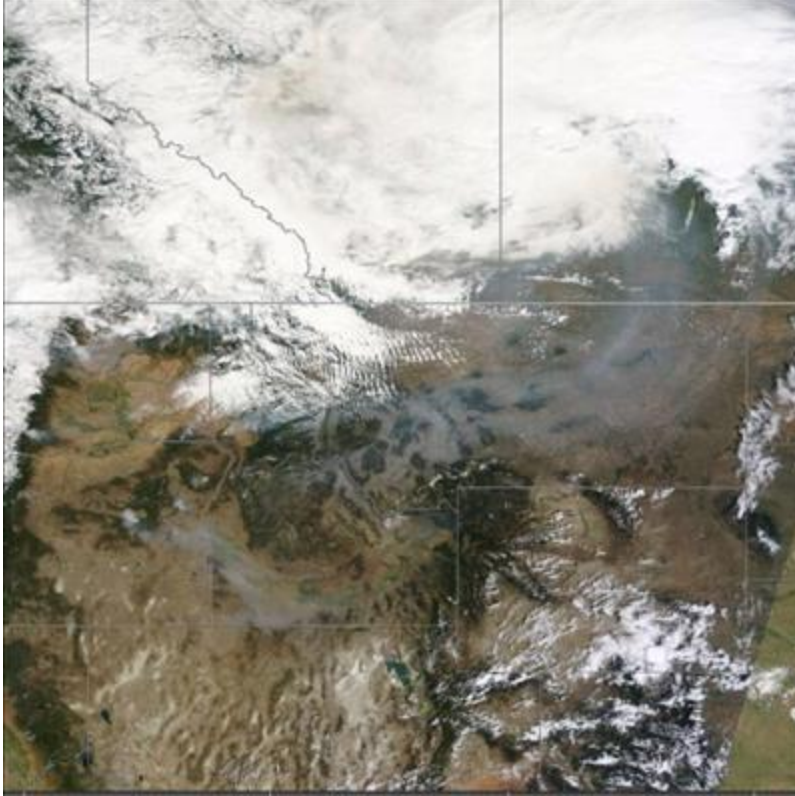
Another update will be posted at 9am, August 16th to update or cancel the air quality alert.

Air quality is poor across the region today. In Helena the North Hills are not visible due to the dense smoke.



Source: [MT DEQ](#)

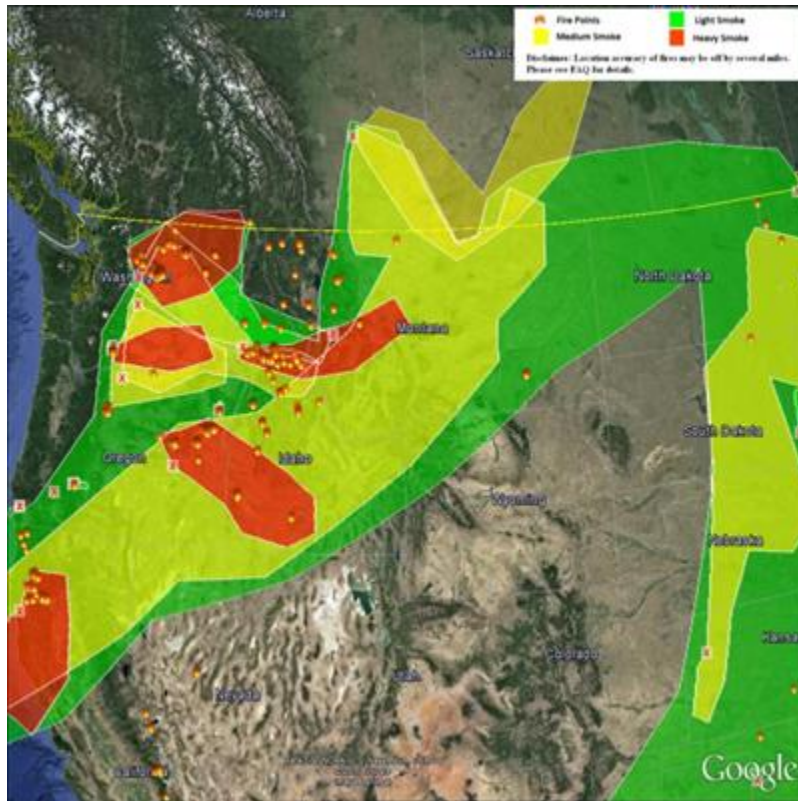
A dense smoke plume can be seen across Montana on satellite imagery this afternoon.



Source: [NASA](#)



Numerous fires and moderate to dense smoke was detected on satellite analysis today.



Source: [NOAA](#)

Fire activity across Idaho and western Montana increased dramatically since yesterday.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	Missoula Hamilton Butte
	<a href="#">Unhealthy</a>	Libby Frenchtown Helena Bozeman
	<a href="#">Unhealthy for Sensitive Groups</a>	St. Mary Flathead Valley Great Falls Lewistown Seeley Lake
	<a href="#">Moderate</a>	Malta Billings

		Sidney
	<a href="#">Good</a>	Birney Broadus

#### NOAA Text Description:

**Saturday, August 15, 2015**

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1700Z August 15, 2015

SMOKE:

North Central United/States and South Central Canada extending west southwest towards the Pacific NW: A large area of low to moderate density smoke extends from portions of south-central Canada just north of the Great Lakes through Ontario, southeastern Quebec, southern portion of Hudson Bay extending west through the north-central United States and southern portions of Manitoba, Saskatchewan and Alberta towards a large number of wildfires over the Pacific Northwest states of Montana, Idaho, Washington, Oregon and northern Nevada. Another section of low to moderate density smoke is seen through the Plains, as far down as northern Texas stretching eastward through the middle and upper Mississippi Valley, upper Great Lakes and western portions of Ohio Valley. The heavy density smoke is seen in northwest California heading southwest into the Pacific Ocean, eastern Oregon heading eastward into Idaho. The fires in central Idaho are also producing heavy density smoke traveling eastward to Montana while the fires in northern Washington are going north into British Columbia, the southern smoke plumes are heading eastward.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H151724.html>

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AUGUST 16, 2015

**PM2.5 Location(s):** Hamilton

**Synopsis:** Extensive fire activity throughout central Idaho and western Montana caused smoke impacts throughout Montana. A large plume of smoke originated from the Clearwater Complex fire in Idaho. In addition to this fire, 15 new large incidents were reported in Idaho and Montana due to the thunderstorm activity on Friday evening.

**Documentation:**

*Wildfire Smoke Update for Sunday, August 16, 2015 9:00 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=951>

**Today's Report and Forecast**

An Air Quality Alert has been issued until 4PM for the following counties due to elevated particulate concentrations: Beaverhead, Deer Lodge, Gallatin, Granite, Jefferson, Madison, Ravalli, and Silver Bow. Air quality in Hamilton, Butte, and Bozeman is currently **UNHEALTHY**.

When air quality is **UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

The Air Quality Alert has been cancelled for Broadwater, Cascade, Fergus, Flathead, Glacier, Judith Basin, Lake, Lewis and Clark, Lincoln, Meagher, Mineral, Missoula, Park, Pondera, Powell, Sanders, and Teton Counties due to decreasing hourly particulate concentrations and improved visibility.

While air quality has improved in central and northern Montana, a thick plume of smoke is visible over

southwest Montana. This has prompted the air quality alert to remain in effect in this region. Elsewhere, hourly concentrations have improved significantly since yesterday. Currently, 24-hour average concentrations are [UNHEALTHY](#) in Missoula, Hamilton, Butte, Helena, Lewistown, and Bozeman, [UNHEALTHY FOR SENSITIVE GROUPS](#) in Libby, Flathead Valley, Seeley Lake, Frenchtown, Great Falls, Billings, Sidney, and Birney, and [MODERATE](#) in St. Mary, Malta, and Sidney. The 24-hour average values will take some time to decrease in communities where concentrations have improved.

The cause of this smoke remains the extensive fire activity throughout central Idaho and western Montana. The large plume of smoke moving through southwest Montana appears to originate from the large Clearwater Complex fire in Idaho, which is now reported at 52,759 acres and 15% contained. In addition to this fire, 15 new large incidents are being reported since yesterday in Idaho and Montana due to the thunderstorm activity on Friday evening. A complete list of these fires can be found [here](#).

Two disturbances are expected to pass through the state today and tomorrow. This may cause brief improvement due to varying wind directions. Unfortunately, the large number of fires burning around the region makes it unlikely we will see significant improvement anytime in the next few days. The Bitterroot Valley will likely see the most significant impacts from smoke being transported from Idaho. Elsewhere, expect hazy skies to continue and periods of deteriorating air quality.

Another update will be posted at 4pm to update the status of the air quality alert.

#### **Today's Summary**

**An Air Quality Alert has been issued until 4PM for the following counties due to elevated particulate concentrations: Beaverhead, Deer Lodge, Gallatin, Granite, Jefferson, Madison, Ravalli, and Silver Bow. Air quality in Hamilton, Butte, and Bozeman is currently [UNHEALTHY](#).**

**When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

**The Air Quality Alert has been cancelled for Broadwater, Cascade, Fergus, Flathead, Glacier, Judith Basin, Lake, Lewis and Clark, Lincoln, Meagher, Mineral, Missoula, Park, Pondera, Powell, Sanders, and Teton Counties due to decreasing hourly particulate concentrations and improved visibility.**

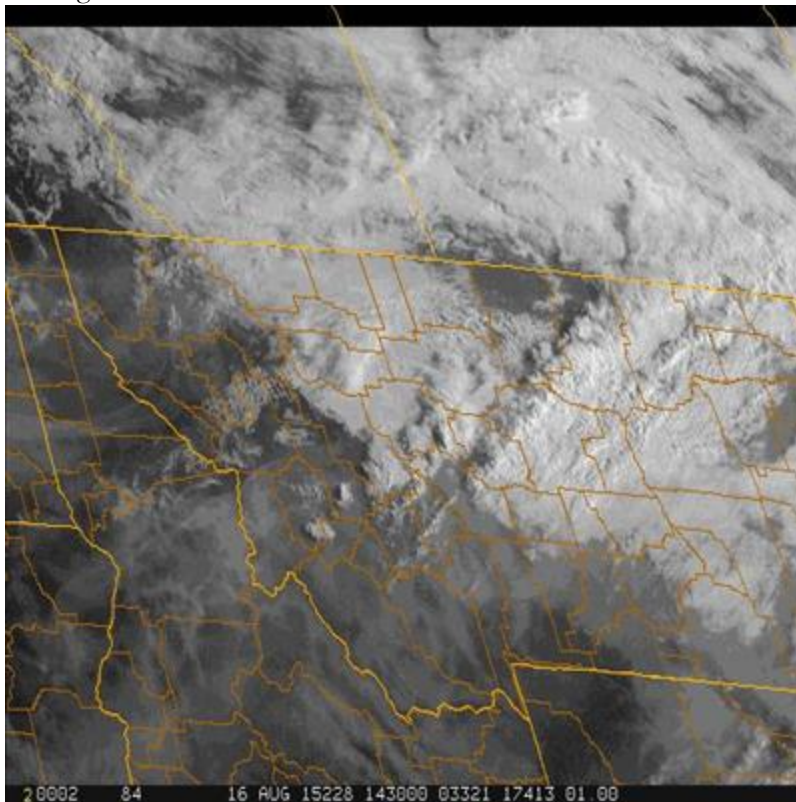
Another update will be posted at 4pm to update the status of the air quality alert.

The Bitterroot Valley continues to be impacted by significant smoke, mostly moving in from Idaho.



Source: [USFS](#)

Smoke can be seen on satellite imagery this morning moving over Montana. The most significant plume is moving over southwest Montana.

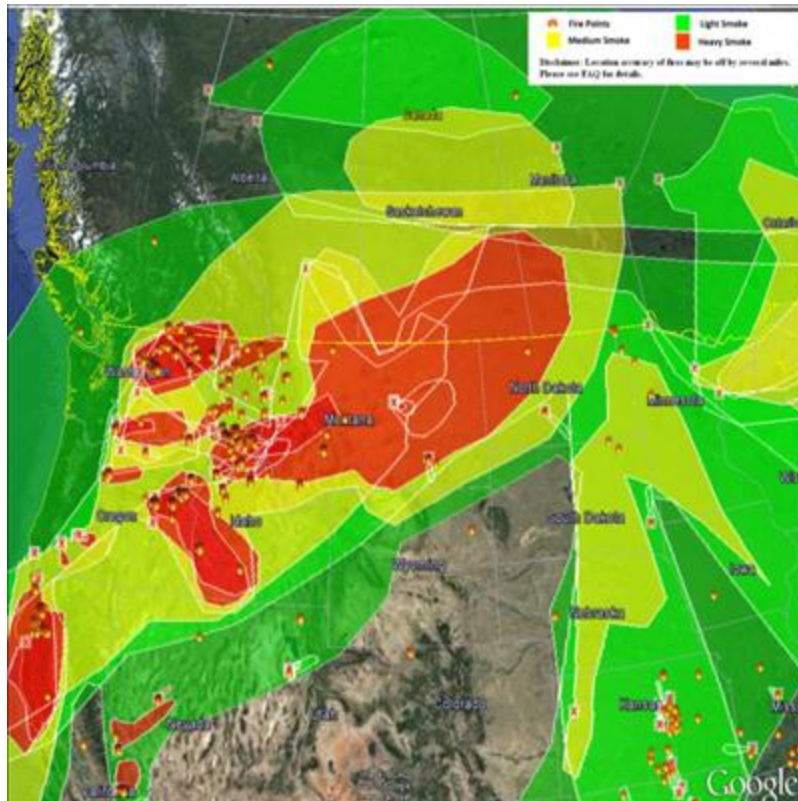


Source: [NWS](#)



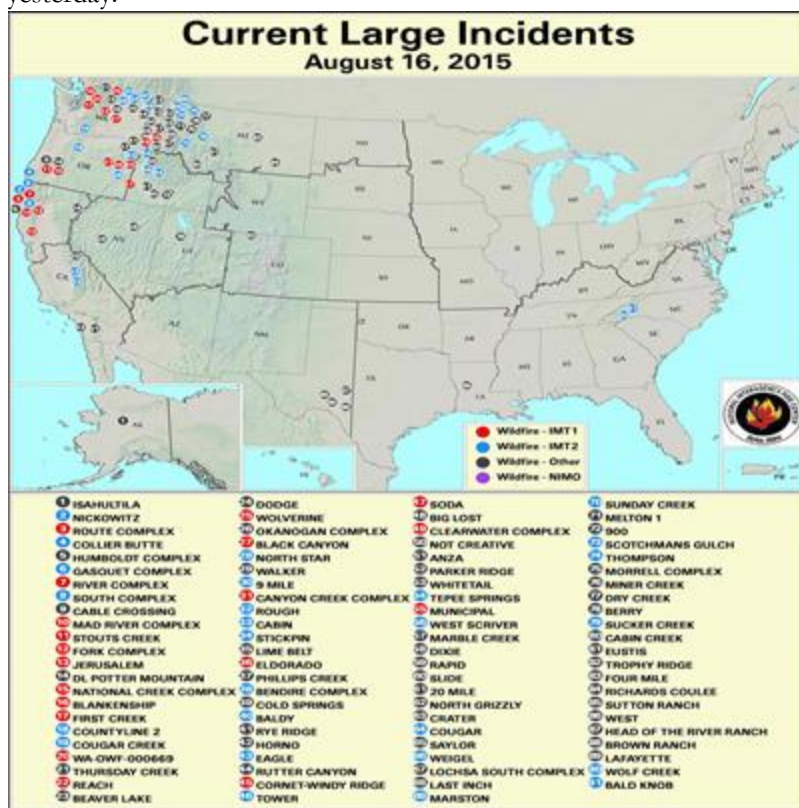


Satellite analysis has detected a large amount of smoke over Montana yesterday, with a dense plume over southwest Montana.



Source: [NOAA](#)

Fire activity continues to increase across Idaho and Montana, with 15 new fires being reported since yesterday.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	<p>Hamilton Butte Bozeman</p> <p>Hourly concentrations have improved in: Missoula Helena Lewistown</p>
<a href="#">Unhealthy for Sensitive Groups</a>	<p>Libby Flathead Valley Seeley Lake Frenchtown Great Falls</p>

	Billings Sidney Birney
<a href="#">Moderate</a>	St. Mary Malta Sidney
<a href="#">Good</a>	

#### ***Wildfire Smoke Update for Sunday, August 16, 2015 3:55 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=952>

#### **Today's Report and Forecast**

An Air Quality Alert has been extended until 9AM August 17, 2015 for the following counties due to elevated particulate concentrations: Beaverhead, Deer Lodge, Gallatin, Granite, Jefferson, Madison, Ravalli, and Silver Bow. Air quality in Hamilton, Butte, and Bozeman is currently **UNHEALTHY**.

When air quality is **UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

Previous discussion with updated images:

While air quality has improved in central and northern Montana, a thick plume of smoke is visible over southwest Montana. This has prompted the air quality alert to remain in effect in this region. Elsewhere, hourly concentrations have improved significantly since yesterday. Currently, 24-hour average concentrations are **UNHEALTHY** in Hamilton, Butte, and Bozeman, **UNHEALTHY FOR SENSITIVE GROUPS** in Libby, Flathead, Seeley Lake, Frenchtown, Missoula, Helena, Lewistown, Billings, Sidney, and Birney, and **MODERATE** in Great Falls and Malta. Conditions are currently **GOOD** in St. Mary.

The cause of this smoke remains the extensive fire activity throughout central Idaho and western Montana. The large plume of smoke moving through southwest Montana appears to originate from the large Clearwater Complex fire in Idaho, which is now reported at 52,759 acres and 15% contained. In addition to this fire, 15 new large incidents are being reported since yesterday in Idaho and Montana due to the thunderstorm activity on Friday evening. A complete list of these fires can be found [here](#).

Two disturbances are expected to pass through the state today and tomorrow. This may cause brief improvement due to varying wind directions. Unfortunately, the large number of fires burning around the region makes it unlikely we will see significant improvement anytime in the next few days. The Bitterroot Valley will likely see the most significant impacts from smoke being transported from Idaho. Elsewhere, expect hazy skies to continue and periods of deteriorating air quality.

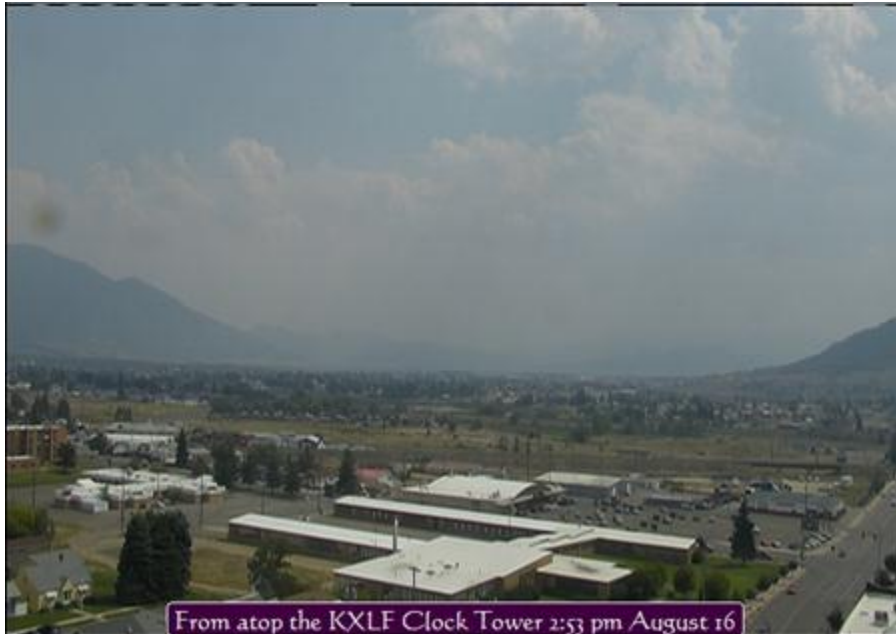
#### **Today's Summary**

An Air Quality Alert has been extended until 9AM August 17, 2015 for the following counties due to elevated particulate concentrations: Beaverhead, Deer Lodge, Gallatin, Granite, Jefferson, Madison, Ravalli, and Silver Bow. Air quality in Hamilton, Butte, and Bozeman is currently **UNHEALTHY**.

When air quality is **UNHEALTHY**, state and local health officials recommend that people with

respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

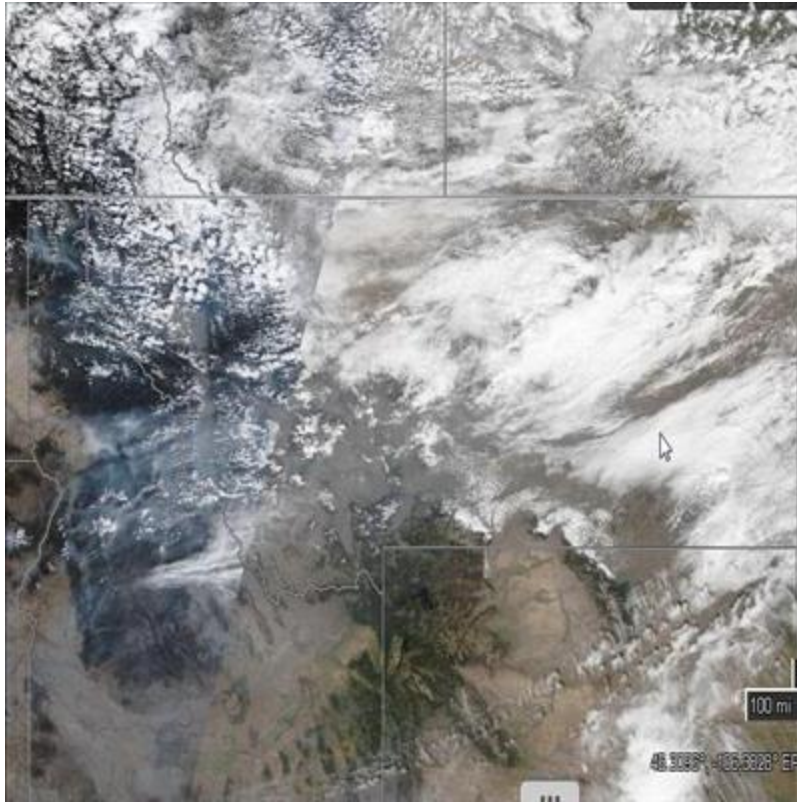
Air quality remains UNHEALTHY in Butte this afternoon due to a plume of smoke moving over from Idaho.



Source: [KTVQ](#)

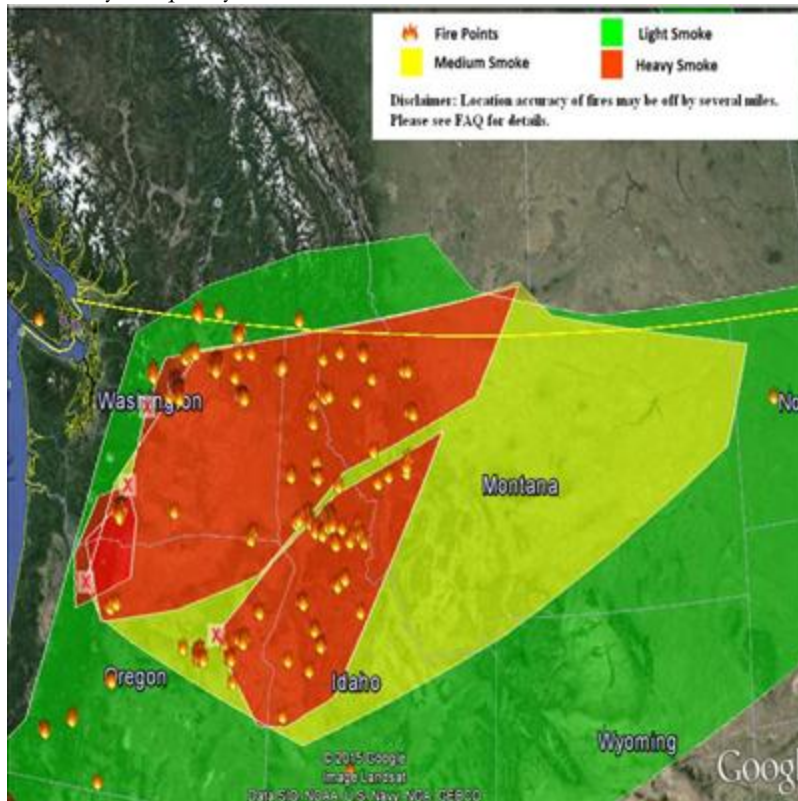


Satellite imagery from this afternoon shows smoke moving over southwest Montana from large fires in Idaho. Smoke can also be seen in northwest Montana from active fires in that area.



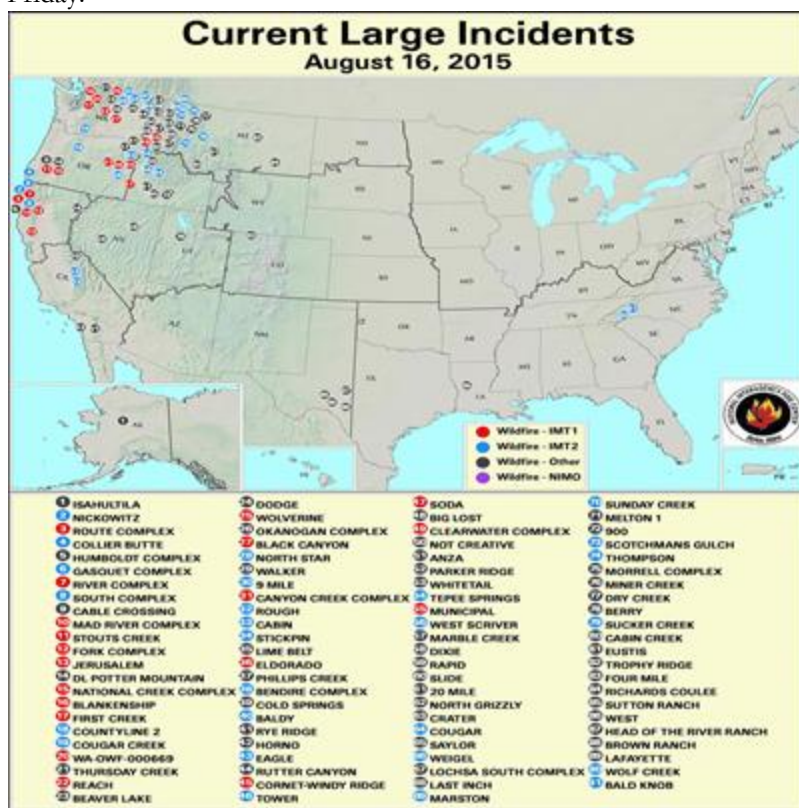
Source: [NASA](#)

Plumes of smoke can be seen moving over Montana today. The plume over southwest Montana is causing unhealthy air quality.



Source: [NOAA](#)

Numerous fires are burning in western Montana, Idaho and Washington after the critical fire weather on Friday.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	
	<a href="#">Unhealthy</a>	Hamilton Butte Bozeman
	<a href="#">Unhealthy for Sensitive Groups</a>	Libby Flathead Valley Seeley Lake Frenchtown Missoula Helena Lewistown Billings Sidney Birney

<a href="#">Moderate</a>	Great Falls Malta
<a href="#">Good</a>	St. Mary

#### NOAA Text Description:

**Sunday, August 16, 2015**

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1530Z August 16, 2015

SMOKE:

Northwestern/North Central US/South Central Canada:

The large number of wildfires scattered across portions of the Northwestern US continued to emit tremendous quantities of smoke. The largest and most dense area of moderate to thick density smoke was visible spreading to the east across portions of Washington, Oregon, and Idaho and across Montana. The thicker smoke is also moving north to southern Alberta, Saskatchewan, and Manitoba in southwestern Canada. In central and south-central Canada, light density plume from the fires in northwestern US, attached to the bigger plume is going through central Ontario heading northeastward to the Hudson Bay. Another light density plume is seen in eastern Saskatchewan moving through northwestern Manitoba, southeastern Northwest Territories, southwestern Nunavut, through central Hudson Bay and into Northern Quebec.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H161613.html>

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AUGUST 17, 2015

**PM2.5 Location(s):** Hamilton

**Synopsis:** Smoke impacts were caused by 12 large fires burning in Montana and 8 large fires in Idaho. In addition, 40 new small fires were reported across Idaho and Montana.

#### Documentation:

*Wildfire Smoke Update for Monday, August 17, 2015 9:28 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=953>

#### Today's Report and Forecast

An Air Quality Alert has been issued until 4PM August 17, 2015 for the following counties due to elevated particulate concentrations: Ravalli and Lincoln. Air quality in Hamilton and Libby is currently **UNHEALTHY**.

When air quality is **UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

The hazy skies continue but air quality has improved in central and eastern Montana this morning as northwest winds have redirected some of the smoke from out-of-state fires away from the area. This is not the case in western Montana, where out-of-state and local fires continue to cause impacts. Large fires in central Idaho continue to send large amounts of smoke into the Bitterroot Valley where 24-hour average values in Hamilton are currently **UNHEALTHY**. 24-hour average values are also **UNHEALTHY** in Libby, where smoke from nearby fires and fires in northeast Washington and northern Idaho are likely all contributing to the poor conditions. Elsewhere, 24-hour air quality is **UNHEALTHY FOR SENSITIVE GROUPS** in Seeley Lake, Frenchtown, Butte, and Bozeman, **MODERATE** in Flathead Valley, Missoula and Helena, and **GOOD** in St. Mary, Great Falls, Lewistown, Malta, Billings, Birney, and Sidney.

The cooler temperatures and increased relative humidity may help ease the extreme fire behavior that many fires have displayed over the past few days. Unfortunately, we are likely to see hazy skies and smoke impacts continue for much of this week in western Montana. A disturbance moving through the area starting today will keep winds from the northwest through Wednesday. This will likely keep smoke from fires in Washington and Idaho away from central and eastern Montana. However, smoke impacts from fires in neighboring states and here in Montana will likely continue in western Montana throughout the week. Winds are expected to turn westerly on Thursday, which may create more widespread impacts across the state.

Hazy skies and smoke impacts ranging from [MODERATE](#) to [UNHEALTHY](#) will continue in western Montana for much of this week. The worst impacts will likely be in areas along the Idaho border and downwind of local fires.

Another update will be posted at 4pm with a full review of fires in Montana and an update to the air quality alert.

#### **Today's Summary**

**An Air Quality Alert has been issued until 4PM August 17, 2015 for the following counties due to elevated particulate concentrations: Ravalli and Lincoln. Air quality in Hamilton and Libby is currently [UNHEALTHY](#).**

**When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

Another update will be posted at 4pm with a full review of fires in Montana and an update to the air quality alert.

Air quality remains [UNHEALTHY](#) in the Bitterroot Valley today due to smoke moving in from Idaho.

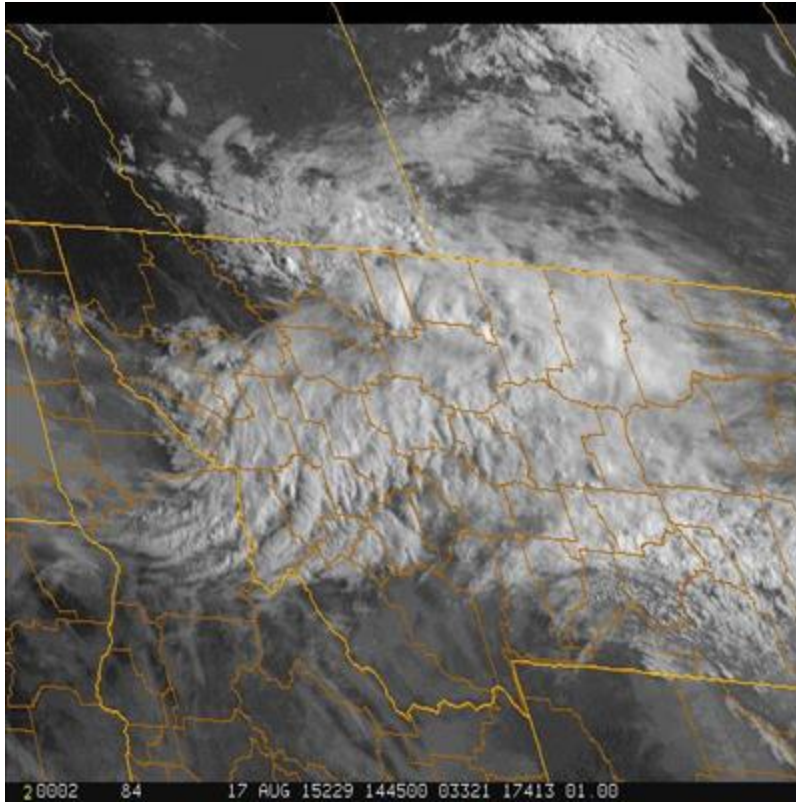


Source: [USFS](#)



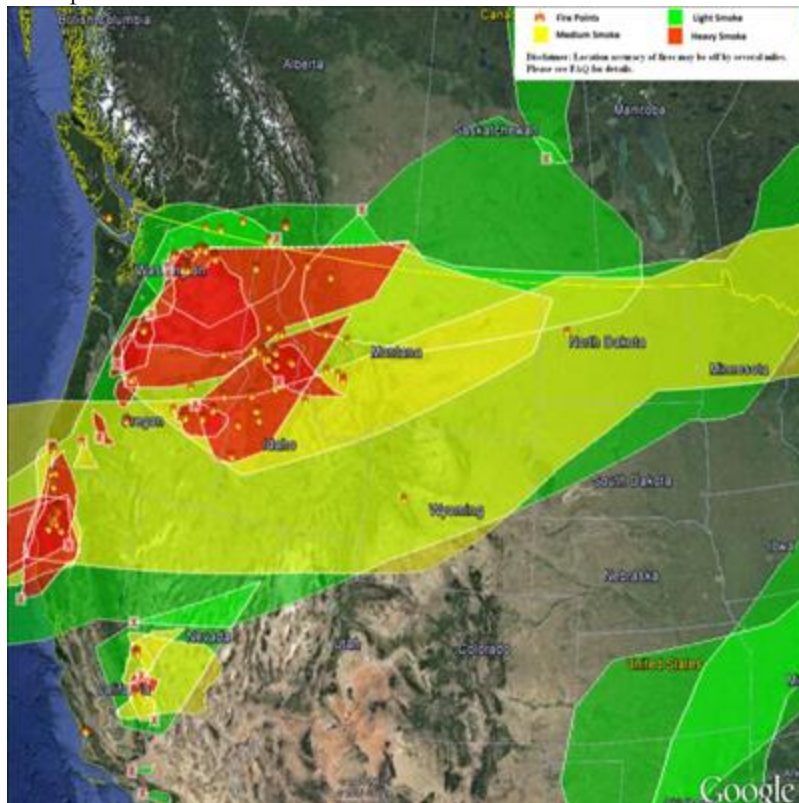


Dense smoke can be seen in eastern Washington and across Idaho. Cloud cover is obscuring the smoke across most of Montana.



Source: [NWS](#)

While concentrations have improved in many areas of central and eastern Montana, hazy skies are still widespread across the state.



Source: [NOAA](#)

Fires remain numerous and active across the region today.



Source: [USFS](https://www.usfs.gov/)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	
	<a href="#">Unhealthy</a>	Hamilton Libby
	<a href="#">Unhealthy for Sensitive Groups</a>	Seeley Lake Frenchtown Butte Bozeman
	<a href="#">Moderate</a>	Flathead Valley Missoula Helena
	<a href="#">Good</a>	St. Mary Great Falls Lewistown Malta

***Wildfire Smoke Update for Monday, August 17, 2015 4:10 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=954>

**Today's Report and Forecast**

**An Air Quality Alert has been extended until 9AM August 18, 2015 for Ravalli County due to elevated particulate concentrations. Air quality in Hamilton is currently UNHEALTHY.**

**When air quality is UNHEALTHY, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

The air quality alert has been cancelled for Lincoln County due to improved hourly concentrations over the past few hours.

The hazy skies and air quality impacts continue for western Montana today, although many areas have seen improvement over course of the day. Hamilton continues to experience the worst impacts, with 24-hour average values holding steady at UNHEALTHY levels. 24-hour average values are also UNHEALTHY in Libby, but hourly values have improved significantly in the past few hours, prompting the cancellation of the air quality alert. The 24-hour values in Libby will take some time to decrease. Elsewhere, 24-hour average air quality is UNHEALTHY FOR SENSITIVE GROUPS in Seeley Lake, Frenchtown, and Butte, MODERATE in Flathead Valley, Missoula, Bozeman, and Great Falls, and GOOD in Helena and across eastern Montana.

There are currently 12 large fires burning in Montana and 8 large fires in Idaho. In addition, 40 new small fires were reported this morning across Idaho and Montana. The largest fire in Montana remains the Thompson fire in Glacier National Park, which has remained steady at 13,680 acres. Smoke production on this fire has been lower than last week over the past couple of days. The Eustis fire north of Three Forks has growth significantly since Friday and is now 9,500 acres and 45% contained. The Melton fire north of Dixon has burned 3,254 acres and is 21% contained. The Trail Creek fire in the Swan Mountains has burned 3,000 acres. The Sucker Creek fire near Lincoln has burned 2,635 acres. The Northeast Kootenai Complex fire, comprised of the Barnaby, Marston, Sunday, and Weigel fires in northwest Montana is currently 2,340 acres. The Cabin Creek fire near Dillon is currently 1,400 acres and is reportedly creating significant haze in the Dillon community. Out in eastern Montana the Trophy Ridge fire has burned over 4,000 acres near Roy, MT and the Reservation Creek fire has burned 1,000 acres near Ashland. In Idaho, the largest fire remains the Clearwater Complex Fire at 43,240 acres. The Parker Ridge fire, which was contributing to the elevated concentrations in Libby over the past day, has burned 6,139 acres in the Idaho Panhandle. In addition, fires in central and northeast Washington are continuing to produce large amounts of smoke.

Luckily the northwest winds associated with the weak disturbance moving over Montana have redirected most of the smoke from out-of-state fires away from Montana. This not the case in the Bitterroot Valley however, where smoke from Idaho continues to create poor air quality. The rest of the impacts within the state are largely due to the fires burning within Montana. These fires will likely continue to create hazy skies through this week with the most significant impacts within close vicinity to the fires. As winds slowly turn to the west over the next few days, we will likely see smoke move into the region once again from Idaho and Washington with smoke impacts increasing throughout the week. In addition, temperatures will be rising throughout the week and dry conditions are expected until Friday. During this time fire activity may increase on local fires, creating additional smoke impacts



Overall, expect air quality impacts ranging from [MODERATE](#) to [UNHEALTHY](#) in western Montana due to active fires in the region. The most significant impacts are expected in the Bitterroot Valley with impacts increasing throughout the week across the region.

**Today's Summary**

An Air Quality Alert has been extended until 9AM August 18, 2015 for Ravalli County due to elevated particulate concentrations. Air quality in Hamilton is currently [UNHEALTHY](#).

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

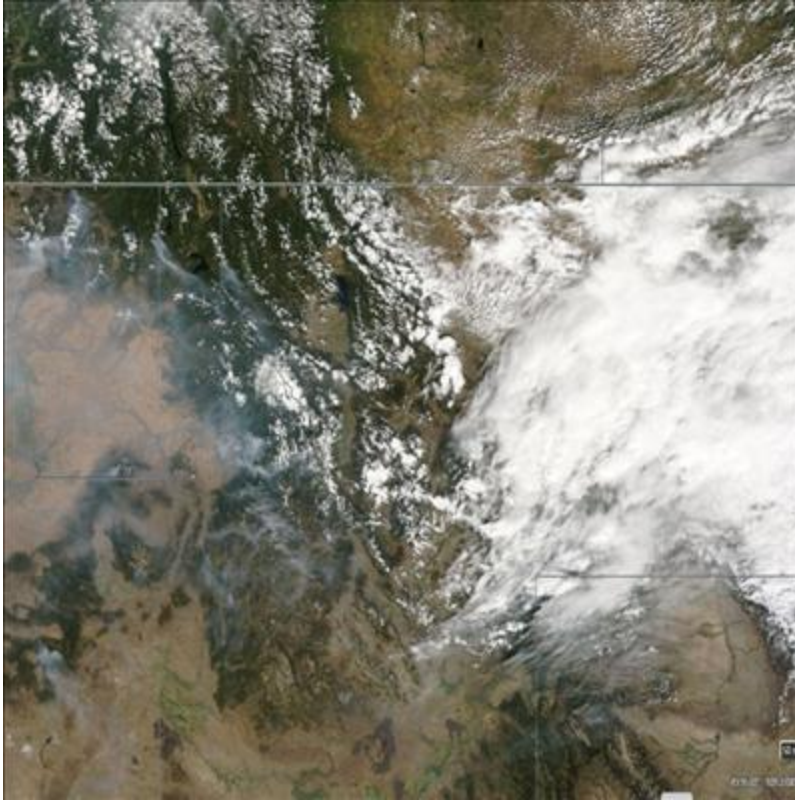
The air quality alert has been canceled for Lincoln County due to improved hourly concentrations over the past few hours.

Air quality remains [UNHEALTHY](#) in the Bitterroot Valley this afternoon.



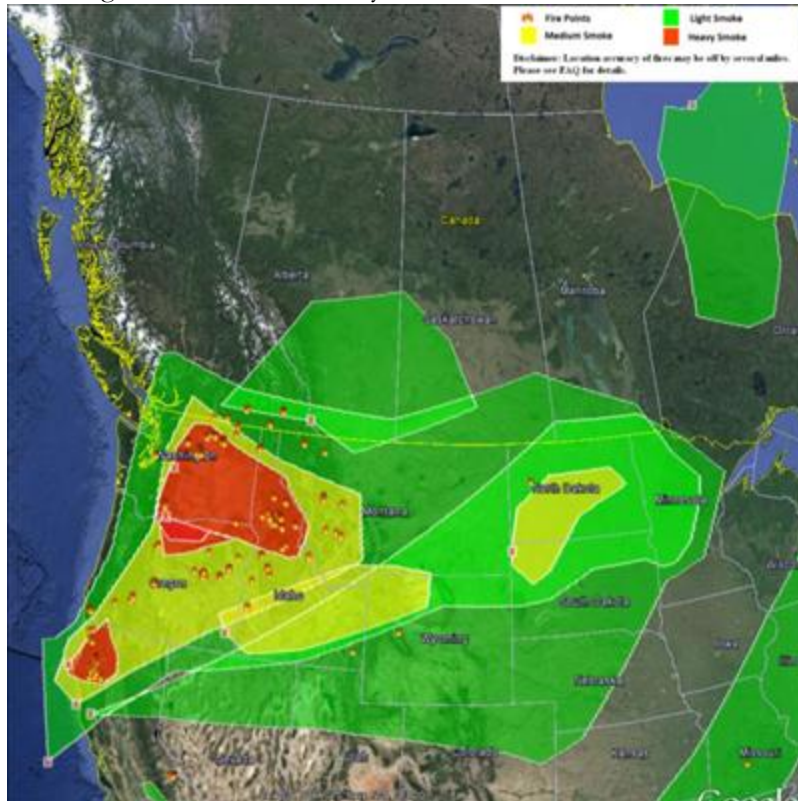
Source: [USFS](#)

Satellite imagery this afternoon shows most of the smoke from Idaho and Washington moving to the southeast. Some smoke is seen over the Bitterroot Valley.



Source: [NASA](#)

The dense plumes of smoke are mainly outside of Montana this afternoon, although impacts are still occurring in the Bitterroot Valley.



Source: [NOAA](#)

Fire activity remains high in Washington, Idaho, and western Montana.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Hamilton Hourly concentrations have improved in: Libby
<a href="#">Unhealthy for Sensitive Groups</a>	Seeley Lake Frenchtown Butte
<a href="#">Moderate</a>	Flathead Valley Missoula Bozeman Great Falls
<a href="#">Good</a>	All other reporting sites.

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1630Z August 17, 2015

### SMOKE:

Western and Central US/Canada:

A large area of light to heavy density smoke is being emitted from wildfires burning in the Pacific NW that stretches across the country. The heaviest smoke is visible around the large wildfire complexes located in California, Oregon, Washington, And Idaho. Medium-density smoke is visible throughout California, Oregon, Washington, Idaho, Montana, and Wyoming. Another patch of medium density smoke is visible throughout North and South Dakota, while Light density smoke is visible in majority of northwestern and central US moving as far east as the Northern and Southern Plains and Upper and Middle Mississippi. Another separate light density plume likely from the northwestern US is seen extending from Texas, Arkansas, Kansas, Missouri, Illinois and as far north as Wisconsin and Michigan. Lastly, another patch of light density plume is seen in eastern Manitoba, northern Ontario, through central Hudson Bay and into northern Quebec.

Northern and Central California:

Areas of low to heavy density smoke from the cluster of fires in northern California is moving west to the Pacific along the coast. The fire in central California is also producing small but low to moderate density smoke heading northwest and will most likely join the the bigger smoke produced from the fires in northwestern US later on the day.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H171706.html>

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AUGUST 18, 2015

**PM2.5 Location(s):** Hamilton

**Synopsis:** Smoke impacts were limited to areas close to the Idaho/Montana border due to fire activity in Washington and Idaho. Elsewhere in the state, smoke impacts were kept to a minimum.

### Documentation:

*Wildfire Smoke Update for Tuesday, August 18, 2015 9:27 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=955>

### Today's Report and Forecast

An Air Quality Alert has been issued until 4PM August 18, 2015 for the following counties due to elevated particulate concentrations: Lincoln, Mineral, Sanders, Missoula, Ravalli, and Beaverhead. Air quality in Hamilton is currently **UNHEALTHY**. Air quality in Libby, Missoula, and Frenchtown is currently **UNHEALTHY FOR SENSITIVE GROUPS** with rising hourly concentrations. Air quality in Seeley Lake is currently **MODERATE**.

When air quality is **UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is **UNHEALTHY FOR SENSITIVE GROUPS**, state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Concentrations are increasing in western Montana this morning as smoke from the numerous fires in northwest Montana and Idaho impact the far western side of the state. 24-hour average air quality is



currently [UNHEALTHY](#) in Hamilton, [UNHEALTHY FOR SENSITIVE GROUPS](#) in Libby, Frenchtown, and Missoula, and [MODERATE](#) in Seeley Lake. The satellite imagery this morning shows extensive smoke along the Idaho/Montana border. The visible smoke on satellite combined with rising concentrations on monitors in western Montana has led to the air quality alert being extended to counties along the Idaho/Montana border. Elsewhere, concentrations are [GOOD](#) in the Flathead Valley and areas east of the Divide as winds direct smoke away from the area.

The cool temperatures combined with a weak disturbance moving through have helped keep smoke impacts limited to western Montana this morning. Showers and thunderstorms are expected in areas along the Divide and points east today. After the passage of this system, winds will be shifting to the west and temperatures will be on the rise. This will likely lead to increased fire activity on active fires as well as smoke from Idaho and Washington moving further into Montana.

Expect smoke impacts ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [VERY UNHEALTHY](#) in far western Montana, with the most significant impacts likely in the Bitterroot Valley. Areas near the Divide and in eastern Montana can expect GOOD to MODERATE air quality today with concentrations likely increasing throughout the week.

Another update will be posted around 4pm with a review of active fires and an update to the air quality alerts.

#### **Today's Summary**

**An Air Quality Alert has been extended until 4PM August 18, 2015 for the following counties due to elevated particulate concentrations: Lincoln, Mineral, Sanders, Missoula, Ravalli, and Beaverhead. Air quality in Hamilton is currently [UNHEALTHY](#). Air quality in Libby, Missoula, and Frenchtown is currently [UNHEALTHY FOR SENSITIVE GROUPS](#) with rising hourly concentrations.**

**When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

**When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.**

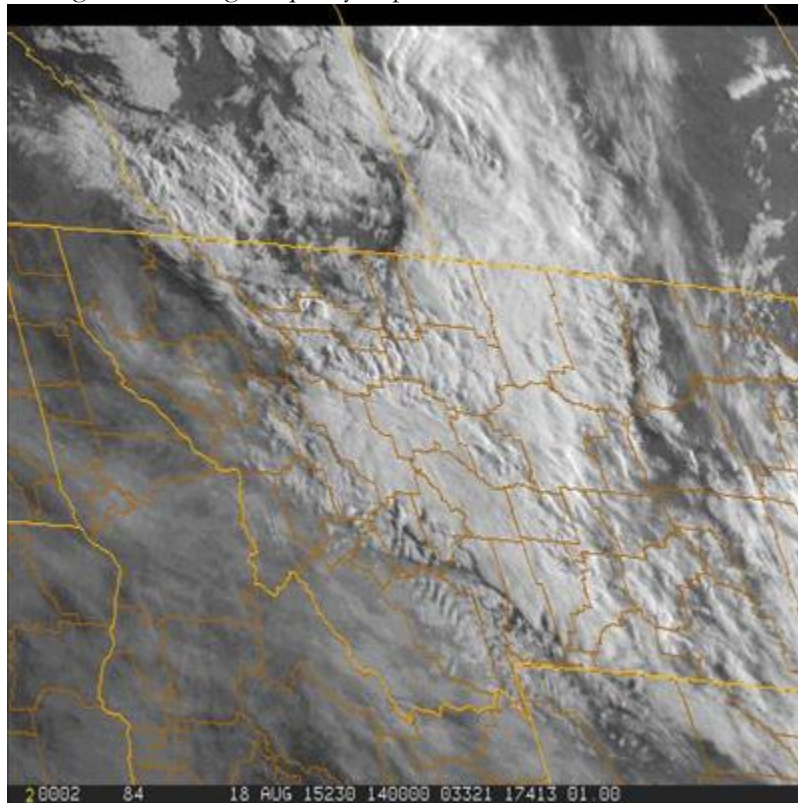
Another update will be posted around 4PM with a rundown of active fires and an update to the air quality alerts.

The most significant impacts continue to be in the Bitterroot Valley, where dense smoke is visible on the Forest Service webcam this morning.



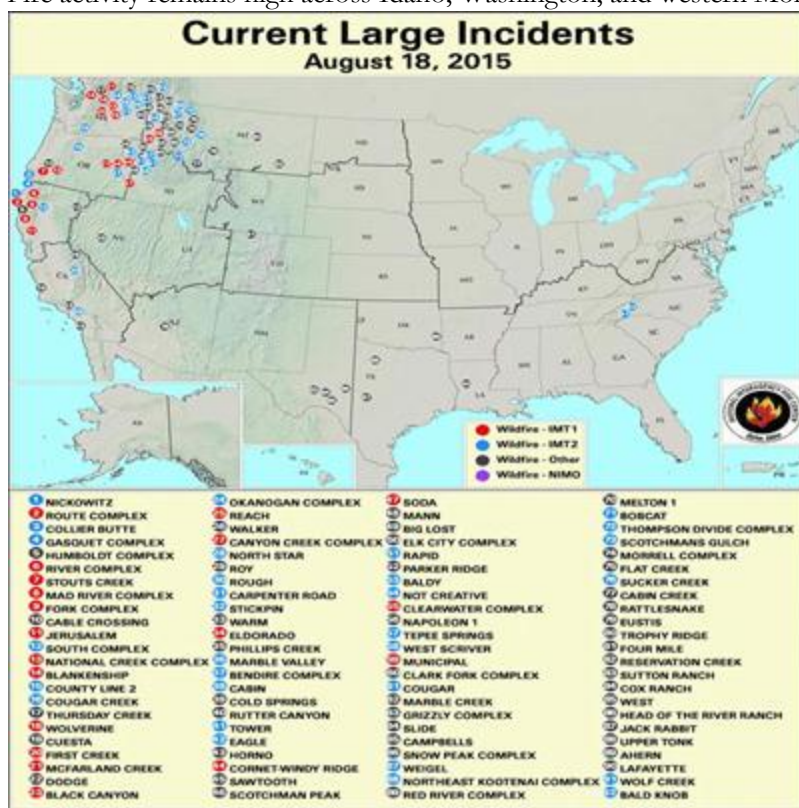
Source: [USFS](#)

Satellite imagery this morning shows a large amount of smoke running along the Montana/Idaho border leading to increasing air quality impacts in far western Montana.



Source: [NWS](#)

Fire activity remains high across Idaho, Washington, and western Montana today.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	
	<a href="#">Unhealthy</a>	Hamilton
	<a href="#">Unhealthy for Sensitive Groups</a>	Libby Frenchtown Missoula
	<a href="#">Moderate</a>	Seeley Lake
	<a href="#">Good</a>	All other reporting sites.

*Wildfire Smoke Update for Tuesday, August 18, 2015 4:13 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=956>

**Today's Report and Forecast**

An Air Quality Alert has been issued until 9AM August 19, 2015 for the following counties due to elevated particulate concentrations: Lincoln, Mineral, Sanders, Missoula, Ravalli, and Beaverhead. Air quality in Hamilton is currently **UNHEALTHY**. Air quality in Libby, Missoula, and Frenchtown is currently **UNHEALTHY FOR SENSITIVE GROUPS** with rising hourly concentrations. Air quality in Seeley Lake is currently **MODERATE**.

When air quality is **UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is **UNHEALTHY FOR SENSITIVE GROUPS**, state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Air quality impacts continue in far western Montana this afternoon with impacts improving in Libby this afternoon while deteriorating in Butte. 24-hour average air quality is currently **UNHEALTHY** in Hamilton, **UNHEALTHY FOR SENSITIVE GROUPS** in Libby, Frenchtown and Missoula, and **MODERATE** in Seeley Lake and Butte. Hourly values in Libby have decreased to **GOOD** levels this afternoon, while hourly values in Butte have risen to **MODERATE**. We may see more improvement in western Montana over the next few hours as winds shift more northerly this evening. However, due to the large amount of smoke visible on satellite along the Idaho/Montana border and the high concentrations still being reported, the air quality alert will remain in place through tomorrow morning.

The cool temperatures that are impacting the state today have helped decreased smoke impacts from many fires here in Montana. Unfortunately, smoke production is still high in Idaho and Washington, which has created the **UNHEALTHY** air quality along the Idaho/Montana border. Some of this smoke has made its way to Butte this afternoon. This smoke may improve over the next few hours, although this improvement will likely be temporary as the northerly winds will be shifting to the west again tomorrow.

The Thompson fire in Glacier National Park has now been combined with two smaller fires in the area to create the Thompson Divide Complex. The 13,784 acre complex has had moderate fire behavior over the last few days thanks to the cooler weather. Other new fires include the Napoleon 1 fire near Noxon, MT at 250 acres which is displaying moderate fire behavior. The Flat Creek fire near Polson is reporting active fire behavior and has burned 200 acres. The Sawtooth fire near Troy, MT has burned 100 acres and is displaying moderate fire behavior. The existing large fires in Montana displayed minimal gains yesterday due to the cooler weather.

The main cause of smoke in the Bitterroot Valley is the Clearwater Complex fire in Idaho, which grew 14,876 acres since the report yesterday and is now at 58,116 acres. In addition, 5 new large fires were reported in Idaho yesterday. Existing fires, including the Scotchman Peak fire near Sandpoint, ID which increased in size 1,750 acres yesterday, have shown active fire behavior throughout this period. Fire activity in Washington continues to generate large plumes of smoke, but the northerly component to the wind has redirected this smoke away from Montana.

The north to northwest winds will slowly shift to the west as a flat high pressure ridge builds into the region on Wednesday. Temperatures will be increasing tomorrow and Thursday and little to no precipitation is expected during this period. The drier and warmer conditions may bring a resurgence to some of the fires that have been calmed by the cooler temperatures over the past couple days. We may see increased smoke

impacts downwind of local fires by Thursday. The shift to westerly winds may also usher in smoke from fires in Idaho and Washington further into Montana. This will expand that area currently being impacted by smoke to include Flathead Valley, Helena, Bozeman, and possibly parts of eastern Montana.

Beginning Friday we will see another shift in the weather pattern. A low pressure trough will swing down from Canada into the state, bringing cold temperatures with increased precipitation and winds. There is even a chance of snow at higher elevations. This weather will dampen fire activity on many fires in northwest Montana and may help flush out some valleys that have had a prolonged periods of poor air quality. After the passage of the low pressure system on Saturday, a ridge of high pressure begins to build into the area once again. Smoke impacts over the weekend and into next week will depend on what fire activity remains after the cold, wet weekend.

Overall, expect impacts ranging from [MODERATE](#) to [UNHEALTHY](#) in western Montana over the next 24 hours. Impacts may expand into areas along the Divide and eastern Montana on Wednesday and Thursday. A big change is on the way for Friday and Saturday. Cold, wet weather may help mitigate smoke impacts in most locations come Friday evening and Saturday. Smoke impacts next week will depend on fire activity after this system moves through.

#### **Today's Summary**

**An Air Quality Alert has been issued until 9AM August 19, 2015 for the following counties due to elevated particulate concentrations: Lincoln, Mineral, Sanders, Missoula, Ravalli, and Beaverhead. Air quality in Hamilton is currently [UNHEALTHY](#). Air quality in Libby, Missoula, and Frenchtown is currently [UNHEALTHY FOR SENSITIVE GROUPS](#) with rising hourly concentrations. Air quality in Seeley Lake is currently [MODERATE](#).**

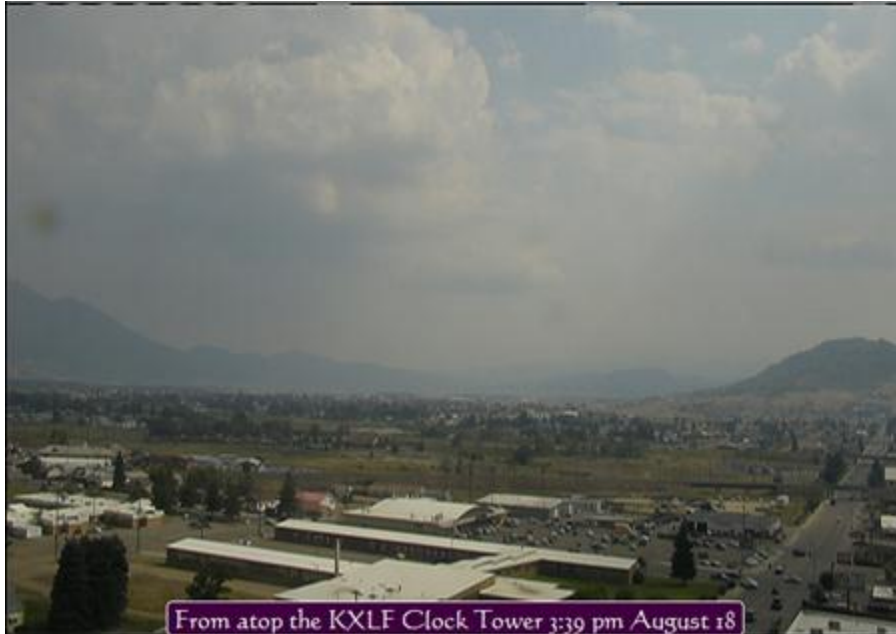
**When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

**When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.**

Expect impacts ranging from [MODERATE](#) to [UNHEALTHY](#) in western Montana over the next 24 hours. Impacts may expand into areas along the Divide and eastern Montana on Wednesday and Thursday. A big change is on the way for Friday and Saturday. Cold, wet weather may help mitigate smoke impacts in most locations come Friday evening and Saturday. Smoke impacts next week will depend on fire activity after this system moves through.

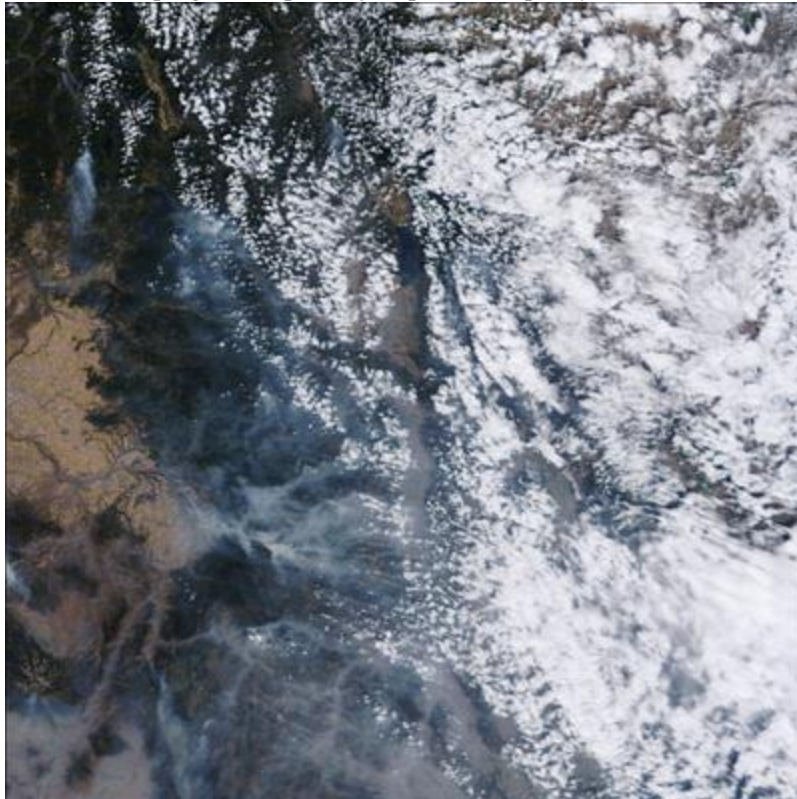


Skies are becoming hazy in Butte this afternoon as air quality concentrations rise.



Source: [KTVQ](#)

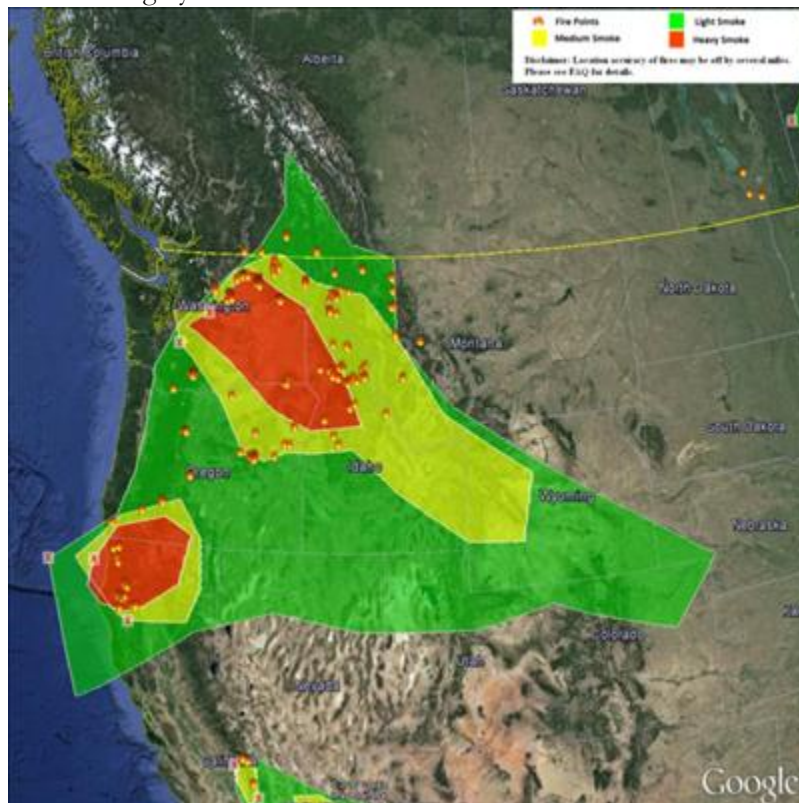
Significant smoke is visible on satellite this afternoon in Idaho and across the border in Montana. Northerly winds are helping to temporarily improve air quality in northwest Montana.



Source: [USFS](#)

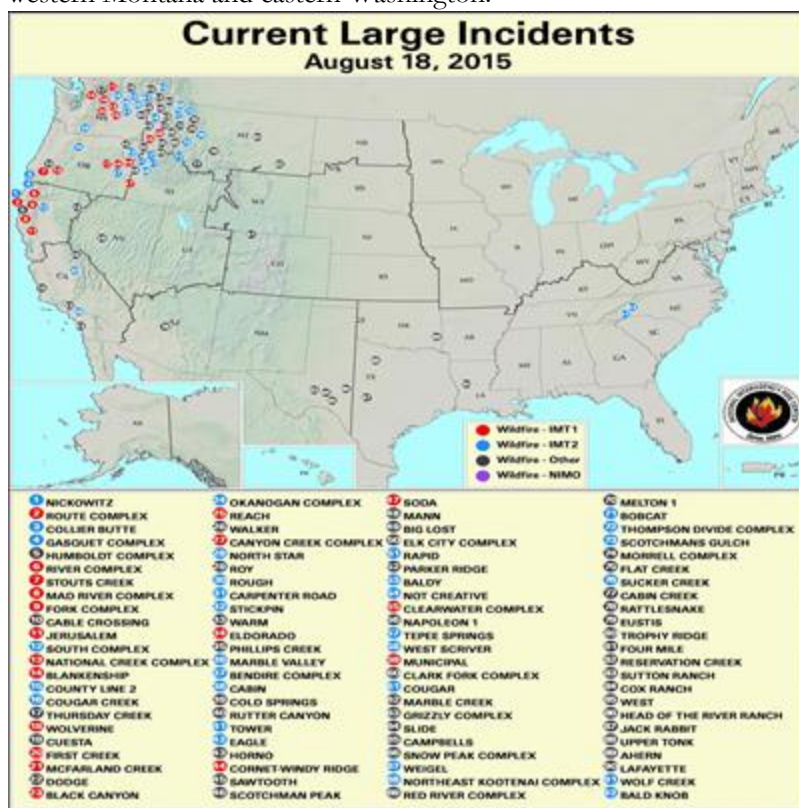


Satellite imagery has detected dense smoke over Idaho and moderate smoke over western Montana today.



Source: [NOAA](#)

The map below shows current large fires across the county. The highest concentration of fires is in Idaho, western Montana and eastern Washington.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Hamilton
<a href="#">Unhealthy for Sensitive Groups</a>	Libby (hourly concentrations have improved) Missoula Frenchtown
<a href="#">Moderate</a>	Seeley Lake Butte
<a href="#">Good</a>	All other reporting sites.

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1530Z August 18, 2015

### SMOKE:

Western US/Plains/Southern Canada:

Numerous wildfires burning across the Pacific Northwest and California are producing tremendous amounts of smoke over a large section of western/central US. Moderately dense to dense smoke is seen across sections of northern California, covering NE Oregon, most of Washington and heading southeast through Idaho into Wyoming. The heaviest smoke is located over northwest California, northeastern Oregon, central/eastern Washington and into parts of northern Idaho. Lighter smoke spreads as far east as Colorado and as far north as southern British Columbia. Another area of residual smoke from the wildfires out west is seen over parts of the Southern Plains, spreading northeast across Texas, eastern Oklahoma, Arkansas, SE Missouri and most of Illinois.

Northeast US/Central Canada:

An area of residual light smoke is seen as far south as the coast of New Jersey and extending north across the northeast into New Hampshire, Massachusetts, Connecticut, Rhode Island and as far north as Maine. An area of light density smoke coming from the wildfires in the Pacific Northwest is visible through central Ontario, southern Hudson Bay and into western Quebec.

Southeast California:

An area of low to moderate density smoke originating from the Pacific Southwest and remnant smoke from Pacific Northwest is seen moving south eastward through Arizona and New Mexico. Patches of moderate density smoke is seen throughout all three states.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H181559.html>

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AUGUST 19, 2015

**PM2.5 Location(s):** Butte, Flathead, Frenchtown, Hamilton, Libby,

**Synopsis:** Satellite imagery confirms significant smoke spreading across Montana from Idaho and Washington. Fire activity in Montana has also increased, leading to widespread significant smoke impacts by late afternoon.

### Documentation:

*Wildfire Smoke Update for Wednesday, August 19, 2015 9:30 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=957>

### Today's Report and Forecast

An Air Quality Alert has been issued until 4PM August 19, 2015 for the following counties due to elevated particulate concentrations and/or expected impacts in the near future: Lincoln, Mineral, Sanders, Missoula, Ravalli, and Beaverhead. Air quality in Hamilton is currently **UNHEALTHY**. Air quality in Libby and Frenchtown is currently **UNHEALTHY FOR SENSITIVE GROUPS**. Air quality in Missoula and Seeley Lake is currently **MODERATE**. Concentrations are expected to deteriorate rapidly throughout the morning.

When air quality is **UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is **UNHEALTHY FOR SENSITIVE GROUPS**, state and local health officials



**recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.**

Air quality improved in most areas of western Montana overnight but dense smoke can be seen moving into parts of western Montana this morning. Hourly concentrations have already reached [UNHEALTHY FOR SENSITIVE GROUPS](#) in Hamilton and Libby. 24-hour average air quality is currently [UNHEALTHY](#) in Hamilton, [UNHEALTHY FOR SENSITIVE GROUPS](#) in Libby and Frenchtown, and [MODERATE](#) in Missoula, Seeley Lake, and Butte. Impacts in western Montana are expected to deteriorate quickly over the next few hours with impacts spreading eastward throughout the day. These conditions have led to the extension of the air quality alert for counties along the border.

Fire activity remains high across Idaho and Washington. The northwest winds over the area have kept smoke impacts to a minimum in areas along the divide and eastward. This will be changing over the next 24 hours as winds once again turn to the west. The smoke from fires in Idaho and Washington will continue to move into the state throughout the day, with concentrations likely increasing in the Flathead Valley, Butte, Bozeman, and Helena by this evening and areas to the east by Thursday afternoon. In addition, temperatures will warm up and relative humidity will decrease here in Montana, likely increasing activity on fires here in Montana.

Expect air quality impacts ranging from [MODERATE](#) to [VERY UNHEALTHY](#) to spread from west to east through tomorrow. The worst impacts will likely be in the Bitterroot Valley where smoke from the Clearwater Complex continues to fill the Valley.

Another update will be posted around 4PM with an update on current conditions and a look at the weekend.

#### **Today's Summary**

**An Air Quality Alert has been issued until 4PM August 19, 2015 for the following counties due to elevated particulate concentrations and/or expected impacts in the near future: Lincoln, Mineral, Sanders, Missoula, Ravalli, and Beaverhead. Air quality in Hamilton is currently [UNHEALTHY](#). Air quality in Libby and Frenchtown is currently [UNHEALTHY FOR SENSITIVE GROUPS](#). Air quality in Missoula and Seeley Lake is currently [MODERATE](#). Concentrations are expected to deteriorate rapidly throughout the morning.**

**When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

**When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.**

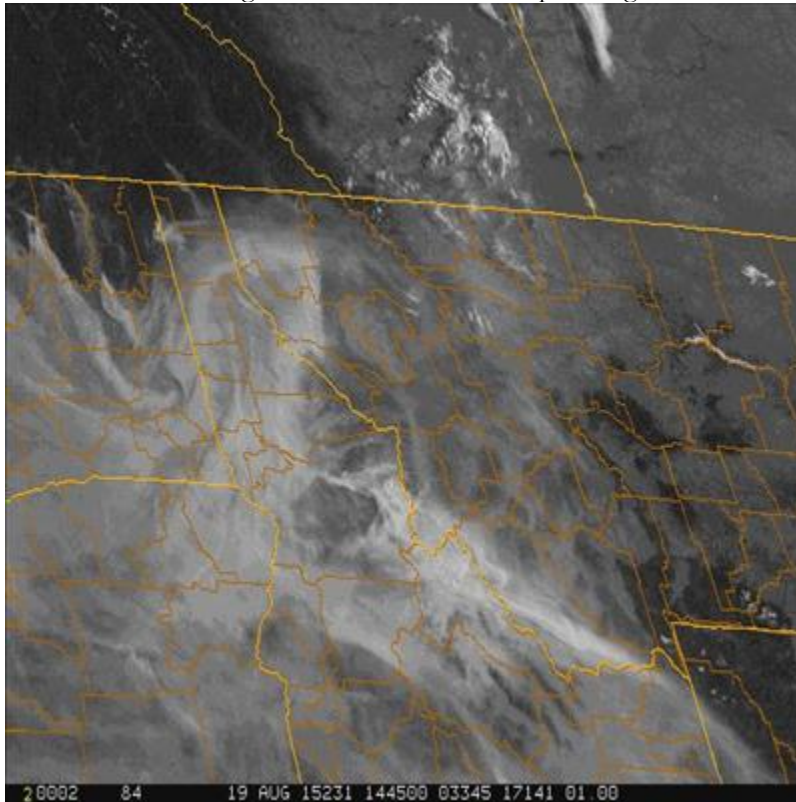
Another update will be posted around 4PM with an update on current conditions and a look at the weekend.

Visibility is significantly decreased in the Bitterroot Valley this morning as smoke moves in from Idaho.



Source: [USFS](#)

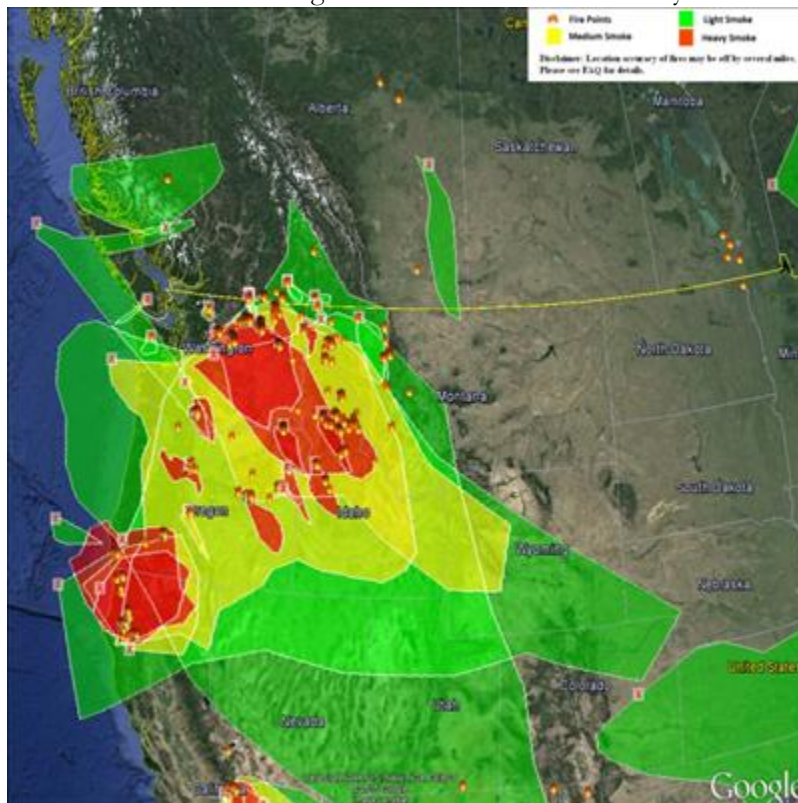
That is all smoke! An enormous amount of smoke is starting to move into western Montana today from fires in Idaho and Washington. This smoke will be spreading to the east as winds turn to the west.



Source: [NWS](#)



Dense smoke over Washington and Idaho will make its way to Montana today.



Source: [NOAA](#)

Fire activity remains very high in the west as smoke impacts are likely today.



Source: [USFS](https://www.usfs.gov/)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	
	<a href="#">Unhealthy</a>	Hamilton
	<a href="#">Unhealthy for Sensitive Groups</a>	Libby Frenchtown
	<a href="#">Moderate</a>	Missoula Seeley Lake Butte
	<a href="#">Good</a>	All other reporting sites.



*Wildfire Smoke Update for Wednesday, August 19, 2015 5:46 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=959>

**Today's Report and Forecast**

UPDATE: Due to the rapidly deteriorating conditions, the air quality alert is being expanded to include the following counties: Broadwater, Cascade, Deer Lodge, Gallatin, Glacier, Granite, Jefferson, Lewis and Clark, Pondera, Powell, Madison, Silver Bow, and Teton Counties. The text is updated below:

**An Air Quality Alert has been issued until 9AM August 20, 2015 for the following counties due to elevated particulate concentrations and/or expected impacts in the near future: Beaverhead, Broadwater, Cascade, Deer Lodge, Gallatin, Glacier, Granite, Jefferson, Flathead, Lake, Lewis and Clark, Lincoln, Pondera, Powell, Madison, Mineral, Missoula, Ravalli, Sanders, Silver Bow, and Teton.**

Air quality in Hamilton and Libby is currently **UNHEALTHY**. Air quality in Seeley Lake is currently **UNHEALTHY FOR SENSITIVE GROUPS**. Air quality in Missoula, Seeley Lake, Flathead Valley, St. Mary, Butte, and Frenchtown is currently **MODERATE**. Concentrations are expected to deteriorate rapidly throughout the evening and overnight in all areas of western Montana. Resident should check hourly conditions on [Today's Air](#) to get the latest values.

When air quality is **UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is **UNHEALTHY FOR SENSITIVE GROUPS**, state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

24-hour average air quality is currently **UNHEALTHY** in Hamilton and Libby. Smoke has been seen moving through western Montana throughout the day which mainly stayed above ground level until this afternoon. Concentrations are starting to increase across western Montana this afternoon with hourly concentrations reaching **MODERATE** levels in Missoula, Frenchtown, Seeley Lake, Great Falls, Butte, and the Flathead Valley in the past hour. Conditions are expected to increase rapidly in St. Mary, Helena, and Bozeman this evening.

Dense smoke is moving over western Montana this afternoon and is mostly a combination of transported smoke from Idaho and Washington as well as increased activity on Montana fires. Webcams are showing smoke moving into the Flathead, Butte, Helena, and Bitterroot Valleys. Smoke is also being seen in Great Falls this afternoon. Winds will be shifting from northwest to west over the next 24 hours. This change will likely push smoke from Idaho and Montana further east into Montana, creating more widespread hazy skies and deteriorating air quality. These impacts will likely persist through Friday afternoon, when a strong low pressure system makes its way down into Montana. Beginning Friday night, winds will be shifting to the northwest and becoming gusty. The best chance of precipitation is in northwest Montana and temperatures will drop below normal across the area. Beginning Saturday evening, a ridge of high pressure will build, which will bring drier and warmer conditions to the area for the end of the weekend and next week.

Smoke impacts are expected to increase from west to east over the next 48 hours with the worst impacts in areas close to the Montana/Idaho border. Beginning Friday afternoon, the increased winds associated with the frontal passage may help improve air quality in some locations while ushering in more smoke in others. The cool temperatures on Saturday will likely dampen fire activity in Montana. We may once again see impacts hugging the Montana/Idaho border due to northwest winds while central and eastern Montana get a

break from the smoke. Beginning Sunday we will likely see more widespread impacts from fires to our west.

Expect air quality ranging from [MODERATE](#) to [VERY UNHEALTHY](#) across western and central Montana over the next 24 hours, spreading further east tomorrow afternoon. Impacts may improve on Friday evening into Saturday before returning Sunday.

#### Today's Summary

UPDATE: Due to the rapidly deteriorating conditions, the air quality alert is being expanded to include the following counties: Broadwater, Cascade, Deer Lodge, Gallatin, Glacier, Granite, Jefferson, Lewis and Clark, Pondera, Powell, Madison, Silver Bow, and Teton Counties. The text is updated below:

**An Air Quality Alert has been issued until 9AM August 20, 2015 for the following counties due to elevated particulate concentrations and/or expected impacts in the near future: Beaverhead, Broadwater, Cascade, Deer Lodge, Gallatin, Glacier, Granite, Jefferson, Flathead, Lake, Lewis and Clark, Lincoln, Pondera, Powell, Madison, Mineral, Missoula, Ravalli, Sanders, Silver Bow, and Teton.**

Air quality in Hamilton and Libby is currently [UNHEALTHY](#). Air quality in Seeley Lake is currently [UNHEALTHY FOR SENSITIVE GROUPS](#). Air quality in Missoula, Seeley Lake, Flathead Valley, St. Mary, Butte, and Frenchtown is currently [MODERATE](#). Concentrations are expected to deteriorate rapidly throughout the evening and overnight in all areas of western Montana. Resident should check hourly conditions on [Today's Air](#) to get the latest values.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

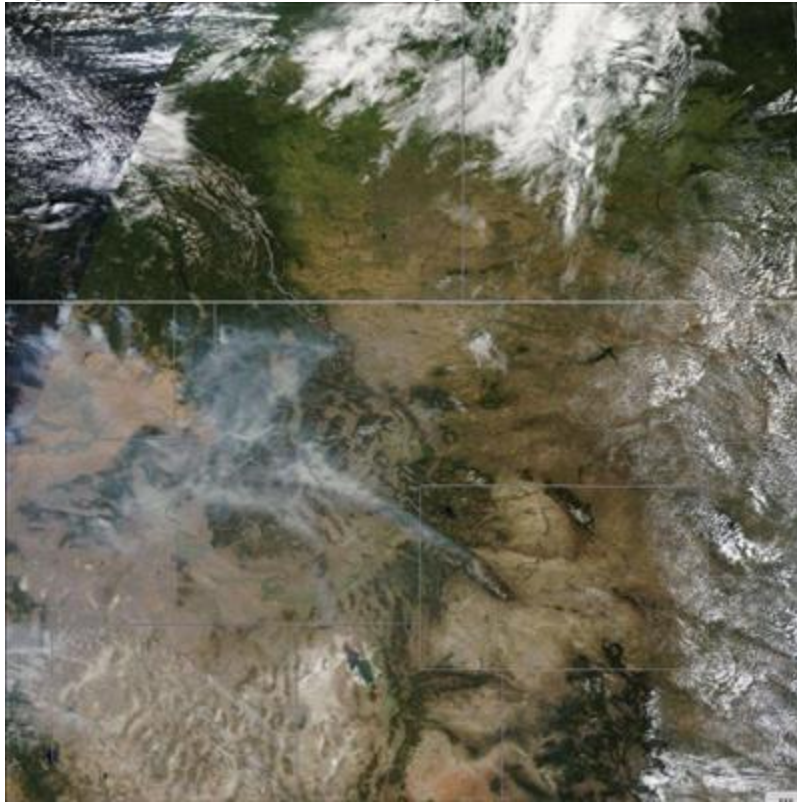
When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

The dense smoke has moved into Missoula this afternoon, concentrations are expected to increase rapidly.



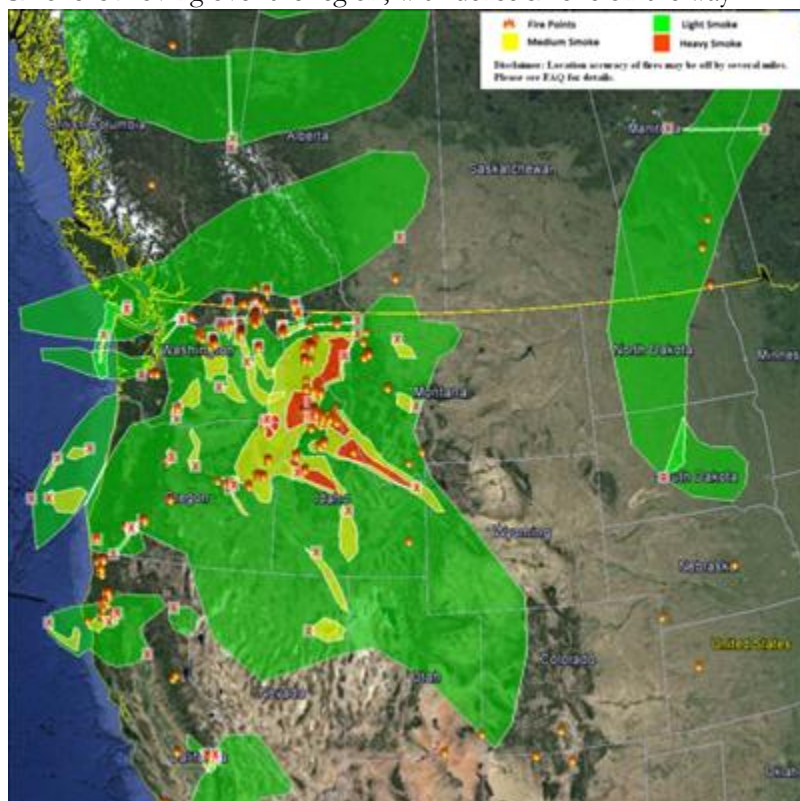
Source: [KTVQ](#)

Significant smoke can be seen moving over western Montana this afternoon on satellite imagery.



Source: [NASA](#)

Smoke is moving over the region, with dense smoke on the way.



Source: [NOAA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	
	<a href="#">Unhealthy</a>	Hamilton Libby
	<a href="#">Unhealthy for Sensitive Groups</a>	Seeley Lake
	<a href="#">Moderate</a>	St. Mary Flathead Valley Frenchtown Missoula Butte
	<a href="#">Good</a>	All other reporting sites. (Impacts expected to increase rapidly in Helena and Bozeman this evening.)

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1815Z August 19, 2015

### SMOKE:

#### Western US/SW Canada:

Large areas of smoke ranging from light to heavy density are visible over a majority of the western US as well as southwest Canada. The heaviest smoke is visible over parts of Oregon, Washington, Idaho, and Montana. Moderate density smoke is visible in this region as well, extending south Nevada as well as over areas of California where other wildfires are burning. The lighter smoke spreads as far east as Colorado and as far north as southern British Columbia. This smoke is mostly from large wildfires burning in the western US. In addition, over parts of Alberta and British Columbia, mostly thin smoke that appears to have originated from Asia is seen moving southeastward.

#### North Central US/South Central Canada/Hudson Bay:

An area of smoke wraps around the backside of an upper low over the Midwest. The smoke extends from the Dakotas north and then northeast across southern Manitoba and along the Manitoba/Ontario border. Another area of thin smoke is present of Hudson Bay as well. This smoke is likely from fires in the western US.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H191828.html>

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AUGUST 20, 2015

**PM2.5 Location(s):** Birney, Broadus, Butte, Flathead, Frenchtown, Hamilton, Helena, Lewistown, Libby, Missoula, Ncore

**PM10 Location(s):** Kalispell, Whitefish, Butte, Columbia Falls, Libby, Missoula

**Synopsis:** Satellite imagery showed a river of smoke from eastern Washington moving up into Canada and then down along western Montana in the morning, moving to the east throughout the day. Westerly winds and generally dry conditions caused smoke to impact the region throughout the day.

### Documentation:

*Wildfire Smoke Update for Thursday, August 20, 2015 9:15 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=960>

### Today's Report and Forecast

An Air Quality Alert has been issued until 9AM August 21, 2015 for the following counties due to elevated particulate concentrations: Beaverhead, Broadwater, Cascade, Deer Lodge, Fergus, Flathead, Gallatin, Glacier, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Park, Pondera, Powell, Madison, Meagher, Mineral, Missoula, Ravalli, Sanders, Silver Bow, and Teton.

Air quality in Flathead Valley, Hamilton, Butte, and Bozeman is currently **VERY UNHEALTHY**.

Air quality in Libby, Seeley Lake, Frenchtown, Missoula, Helena, Lewistown, and Great Falls is currently **UNHEALTHY**.

Air quality in St. Mary is currently **UNHEALTHY FOR SENSITIVE GROUPS**.

When air quality is **VERY UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity;



everyone else should avoid prolonged exertion.

When air quality is **UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is **UNHEALTHY FOR SENSITIVE GROUPS**, state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Air quality has deteriorated significantly since yesterday afternoon across western and central Montana. 24-hour average air quality is currently **VERY UNHEALTHY** in Hamilton, **UNHEALTHY** in Libby, Flathead Valley, Frenchtown, Seeley Lake, Missoula, Helena, Butte, Bozeman, and Great Falls, and **UNHEALTHY FOR SENSITIVE GROUPS** in Lewistown and St. Mary. 8-hour average concentrations are currently **VERY UNHEALTHY** in Flathead Valley, Butte, and Bozeman, and **UNHEALTHY** in Lewistown.

The smoke that was hovering along the Idaho/Montana border over the past few days was pushed eastward yesterday as winds turned more westerly. It took a little while for all the smoke, visible on satellite throughout the day, to settle to the ground level but around 5pm yesterday concentrations started to increase rapidly. Currently, satellite imagery shows a river of smoke from eastern Washington moving up into Canada and then down along western Montana. This smoke is moving to the east this morning.

Westerly winds and generally dry conditions are expected throughout the day today. We will likely see smoke continue to impact the region throughout the day and into tomorrow. The dense smoke plume from Washington is moving to east, so there may be some improvement in areas of western Montana as the plume moves away. However, smoke traveling along the westerly winds is also moving into the state behind this dense plume so air quality is expected to remain poor. Winds are expected to increase this afternoon, possibly leading to a brief improvement in air quality. Unfortunately, high temperatures, low humidity and breezy conditions have prompted red flag warnings across eastern Washington, Idaho and western Montana today, meaning an increase in fire activity and additional smoke. In a nutshell, the significant air quality impacts are expected to linger through at least Friday morning, and likely into tomorrow afternoon.

A cold front and associated low pressure system is expected to impact the state on Friday afternoon. This will bring a chance of precipitation, although most areas are not expected to see much in terms of total rainfall. Snow is possible in the mountains near Glacier National Park. The cooler temperatures may help mitigate some of the fire behavior here in Montana, although the gusty winds may continue to bring in smoke from our west. After the low pressure system passes, a ridge of high pressure will build into the area. This will bring warm temperatures, dry weather, and westerly winds, shifting to the southwest by early next week. Any improvement that occurs on Friday and Saturday will likely deteriorate once again on Sunday due to the large number of fires burning to our west.

It is difficult to point to any specific fire or fires causing all the smoke. The large number of fires burning in Washington, Idaho and here in Montana are creating large swaths of smoke moving across the area. For information on specific fires, see information posted [here](#).

Expect air quality ranging from **UNHEALTHY FOR SENSITIVE GROUPS** to **VERY UNHEALTHY** to persist throughout the day and overnight tonight. Impacts may begin to move into eastern Montana as the day progresses.

## Today's Summary

An Air Quality Alert has been issued until 9AM August 21, 2015 for the following counties due to elevated particulate concentrations: Beaverhead, Broadwater, Cascade, Deer Lodge, Fergus, Flathead, Gallatin, Glacier, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Park, Pondera, Powell, Madison, Meagher, Mineral, Missoula, Ravalli, Sanders, Silver Bow, and Teton.

Air quality in Flathead Valley, Hamilton, Butte, and Bozeman is currently [VERY UNHEALTHY](#).

Air quality in Libby, Seeley Lake, Frenchtown, Missoula, Helena, Lewistown, and Great Falls is currently [UNHEALTHY](#).

Air quality in St. Mary is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

There is not much to see on many webcams this morning except smoke. Here in Helena a dense plume is causing Unhealthy air quality.



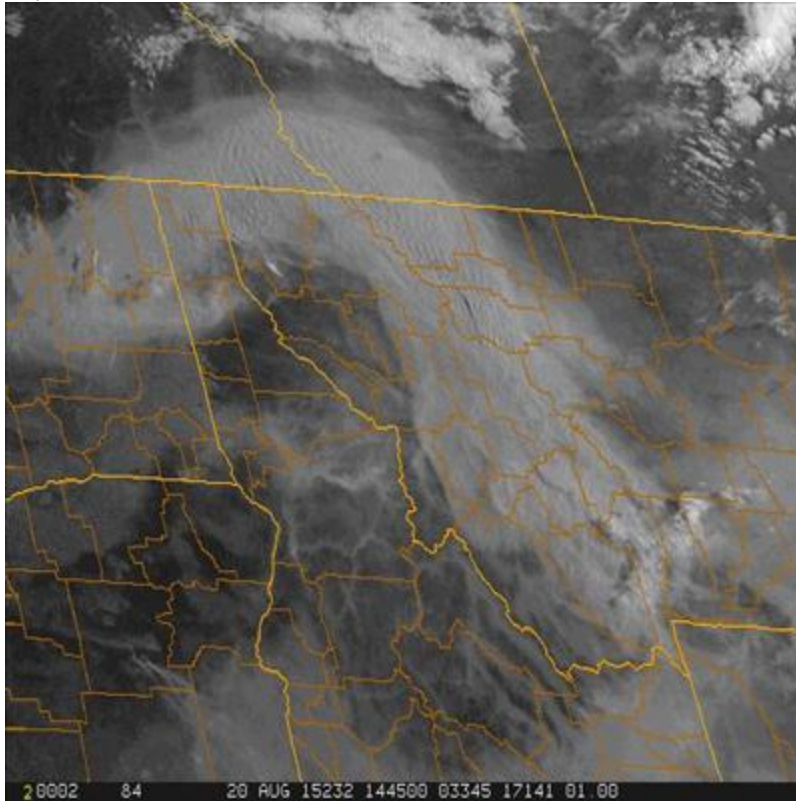
Source: [MT DEQ](#)

A similar scene is visible in Butte this morning where 8-hour average concentrations have reached very unhealthy levels.



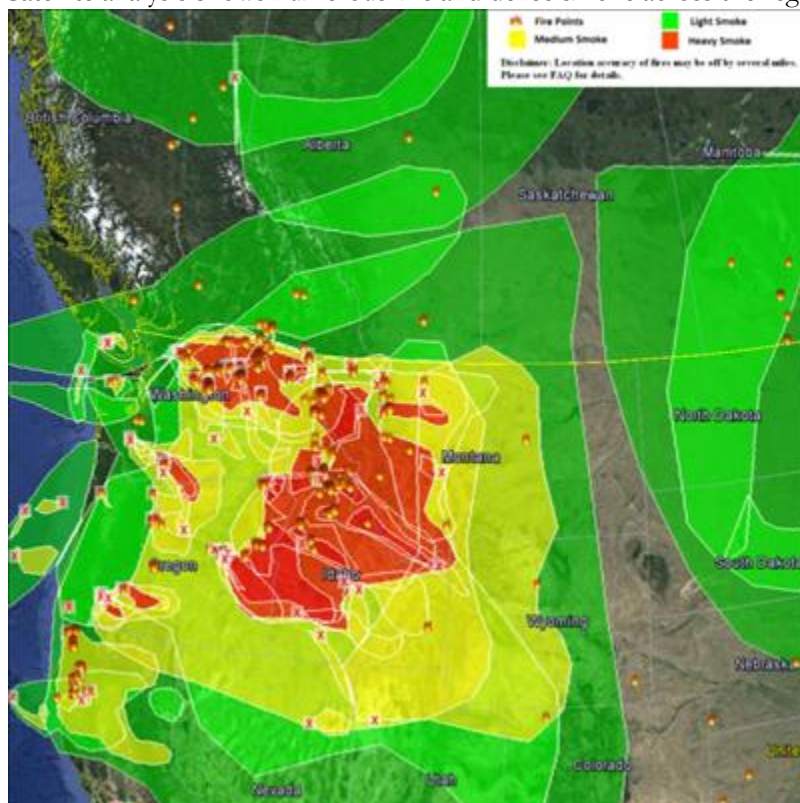
Source: [KTVQ](#)

A river of smoke is seen moving across western Montana this morning, with more smoke in Idaho making its way to Montana.



Source: [NWS](#)

Satellite analysis shows numerous fire and dense smoke across the region.



Source: [NOAA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
		24 hour Hamilton
	<a href="#">Very Unhealthy</a>	8-hour Flathead Valley Butte Bozeman
		24 hour Libby Seeley Lake Frenchtown Missoula Helena Great Falls
	<a href="#">Unhealthy</a>	8-hour Lewistown



	<a href="#">Unhealthy for Sensitive Groups</a>	St. Mary
	<a href="#">Moderate</a>	
	<a href="#">Good</a>	Malta Sidney Birney Broadus Billings

*Wildfire Smoke Update for Thursday, August 20, 2015 4:29 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=962>

**Today's Report and Forecast**

An Air Quality Alert continues until 9AM August 21, 2015 for the following counties due to elevated particulate concentrations: Beaverhead, Big Horn, Broadwater, Carbon, Carter, Cascade, Custer, Deer Lodge, Fallon, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Park, Pondera, Powder River, Powell, Madison, Meagher, Mineral, Missoula, Ravalli, Rosebud, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Treasure, Wheatland, and Yellowstone.

The alert has been expanded to include areas of southeast Montana due to increasing concentrations and smoke visible on satellite imagery.

Air quality in Flathead Valley, Hamilton, Butte, and Bozeman is currently [VERY UNHEALTHY](#).

Air quality in Libby, Seeley Lake, Frenchtown, Missoula, St. Mary, Helena, Lewistown, Great Falls, and West Yellowstone is currently [UNHEALTHY](#).

Air quality in Billings, Birney, and Broadus is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Significant smoke impacts are continuing in west and central Montana today and spreading into southeast Montana this afternoon. The air quality alert has been expanded to include southeast Montana due to rising concentrations and decreased visibility over the past few hours. The dense plume of smoke that was over western Montana this morning has moved eastward and is spreading out. A second plume can be seen moving from west to east across southeast Montana. Behind this plume there has been very little improvement at the ground level with 24-hour air quality remaining [UNHEALTHY](#) to [VERY UNHEALTHY](#) across western Montana. Northeast Montana is the only area of the state

experiencing [GOOD](#) air quality today, although smoke impacts are likely to move in overnight.

The large plume of dense smoke moving over Montana is originating from two large fires that had explosive growth in eastern Washington yesterday. The Okanogan Complex is currently 88,161 acres and the North Star fire is 75,867 acres. Both of these fires grew over 20,000 acres each yesterday. The westerly winds are also transporting smoke in from numerous fires in central Idaho, especially into the Missoula and Bitterroot Valleys. Fire activity is also picking up here in Montana, with smaller plumes of smoke seen moving over parts of western Montana.

The forecast remains on track for the next few days. A red flag warning has now been issued for all of western and northcentral Montana, Idaho, and eastern Washington. The smoke impacts are expected to remain significant through at least tomorrow morning. The cold front moving through tomorrow into Saturday may help mitigate smoke impacts briefly before a ridge of high pressure builds in on Sunday and Monday. We will remain downwind of active fires through at least the early part of next week, with smoke impacts possibly returning on Sunday.

Another update will be posted around 9AM with an update on current conditions and the air quality alerts.

### **Today's Summary**

Air quality ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [VERY UNHEALTHY](#) is expected to continue across most of Montana today into tomorrow. We may see some brief improvement tomorrow afternoon into Saturday before more smoke likely moves in again on Sunday.

**An Air Quality Alert continues until 9AM August 21, 2015 for the following counties due to elevated particulate concentrations: Beaverhead, Big Horn, Broadwater, Carbon, Carter, Cascade, Custer, Deer Lodge, Fallon, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Park, Pondera, Powder River, Powell, Madison, Meagher, Mineral, Missoula, Ravalli, Rosebud, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Treasure, Wheatland, and Yellowstone.**

**The alert has been expanded to include areas of southeast Montana due to increasing concentrations and smoke visible on satellite imagery.**

**Air quality in Flathead Valley, Hamilton, Butte, and Bozeman is currently [VERY UNHEALTHY](#).**

**Air quality in Libby, Seeley Lake, Frenchtown, Missoula, St. Mary, Helena, Lewistown, Great Falls, and West Yellowstone is currently [UNHEALTHY](#).**

**Air quality in Billings, Birney, and Broadus is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).**

**When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.**

**When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

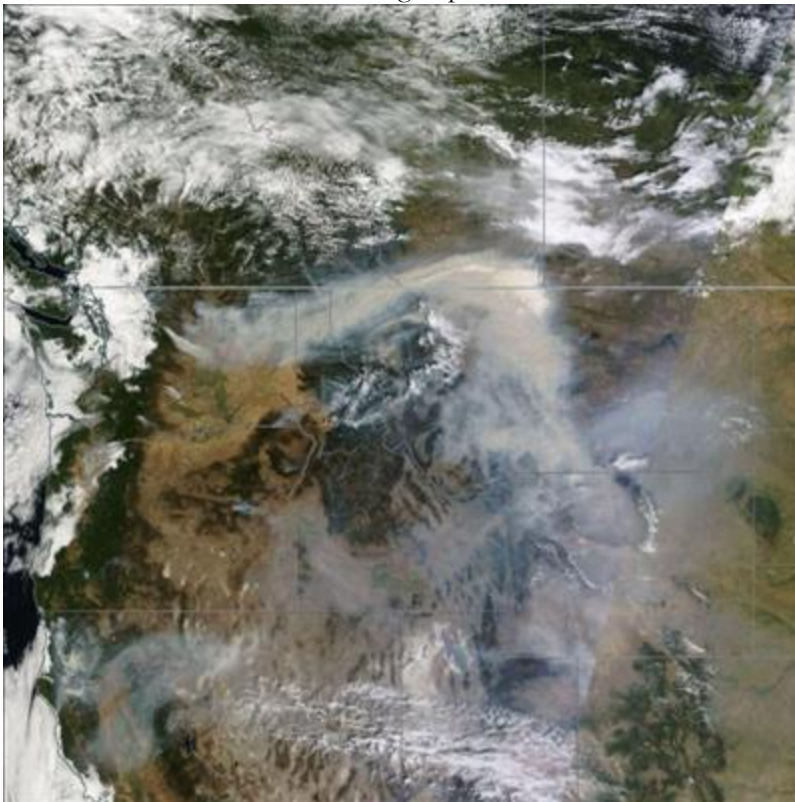
**When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.**

Conditions have deteriorated in Billings this afternoon, with hourly levels reaching UNHEALTHY FOR SENSITIVE GROUPS.



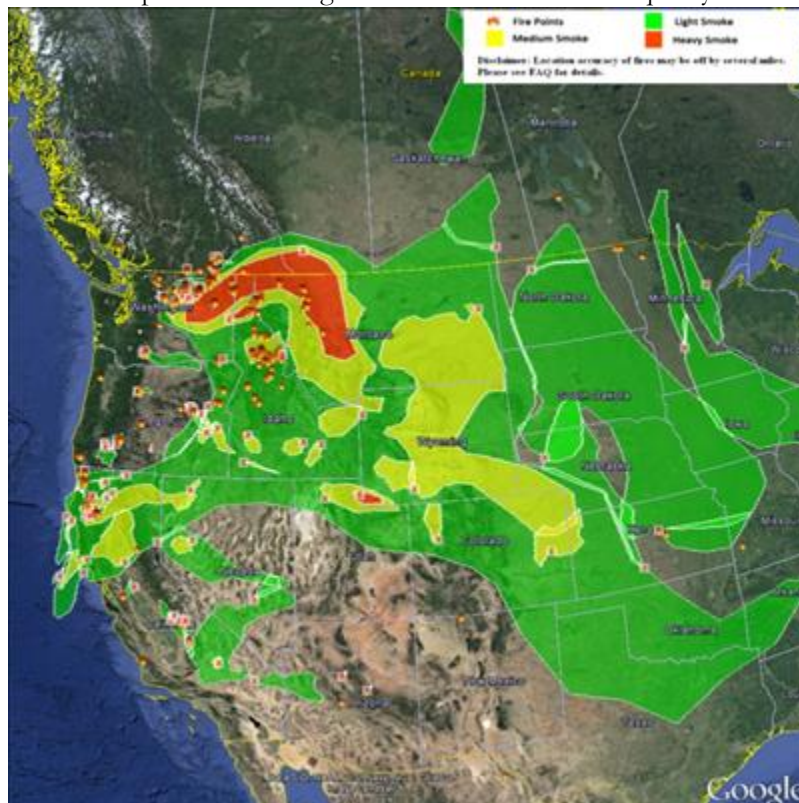
Source: [KTVQ](#)

Dense smoke is seen across northwest, central and southeast Montana from fires in Washington. Fires here in Montana and Idaho are also causing impacts in western Montana.



Source: [NASA](#)

The smoke plumes are being detected on satellite as air quality remains poor in most areas of the state.



Source: [NOAA](#)



Fire activity across the country is shown below.



Source: [USFS](https://www.usfs.gov/)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
<a href="#">Hazardous</a>		
<a href="#">Very Unhealthy</a>		Hamilton
		Flathead Valley
<a href="#">Unhealthy</a>		Butte
		Bozeman
<a href="#">Unhealthy for Sensitive Groups</a>		Libby
		Seeley Lake
		Missoula
		Frenchtown
		Helena
		Great Falls
		Lewistown
		St. Mary
		West Yellowstone
		Billings
		Birney
		Broadus



Moderate	
Good	Malta Sidney

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1815Z August 20, 2015

### SMOKE:

Western and Central US/Southwest and South Central Canada:

Large areas of smoke ranging from light to heavy density are visible over a majority of the western US as well as far southwest and south central Canada . The heaviest smoke is visible over northeast Washington, north Idaho, west Montana, southeast British Columbia, and southwest Alberta this morning. Moderate density smoke is observed farther east and southeast across much of Montana, Wyoming, south Idaho, north Utah, northwest and northeast Colorado, western Nebraska, and northwest Kansas. Most of this smoke comes from the extreme amount of wildfires burning in Washington, Oregon, Idaho, and northwest Montana. Some elevated dust may have mixed with the smoke. Additional moderately dense smoke exists over southeast Oregon, northwest Nevada, and northern California as large wildfires in northwest California continue to produce significant smoke. Light to moderate smoke from fires in the California's Sierra Nevada range is seen over east central California, west and southern Nevada, and western Arizona. Light density smoke from all of these fires extends to the central US and as far south/east as Iowa, Missouri, and Arkansas.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H201816.html>

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AUGUST 21, 2015

**PM2.5 Location(s):** Birney, Broadus, Butte, Flathead, Frenchtown, Hamilton, Helena, Lewistown, Libby, Missoula, Ncore

**PM10 Location(s):** Kalispell, Whitefish, Columbia Falls, Missoula

**Synopsis:** Active fires in Washington, Idaho, and Montana continued to cause elevated smoke levels across Montana.

### Documentation:

*Wildfire Smoke Update for Friday, August 21, 2015 9:34 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=963>

### Today's Report and Forecast

An Air Quality Alert continues until 4PM August 21, 2015 for the following counties due to elevated particulate concentrations: Beaverhead, Big Horn, Broadwater, Carbon, Carter, Cascade, Custer, Deer Lodge, Fallon, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Park, Pondera, Powder River, Powell, Madison, Meagher, Mineral, Missoula, Ravalli, Rosebud, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Treasure, Wheatland, and Yellowstone.

The alert will be updated at 4PM.

Air quality in Libby, Flathead Valley, Hamilton, and Lewistown is currently **VERY UNHEALTHY**.

Air quality in Seeley Lake, Frenchtown, Missoula, Butte, Helena, Great Falls, Bozeman, Billings, Birney, Broadus, and West Yellowstone is currently [UNHEALTHY](#).

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

The air quality impacts continue this morning across western, central, and southern Montana. The only area of Montana without significant smoke impacts remains the northeast corner of the state. Everywhere else is experiencing [UNHEALTHY](#) to [VERY UNHEALTHY](#) 24-hour average air quality. A few areas saw conditions improve overnight compared to yesterday, but concentrations are still well above normal non-wildfire levels and hourly concentrations are starting to increase again in many areas. However, hourly conditions in St. Mary have improved significantly over the past few hours – hopefully a sign of things to come.

A red flag warning is in place across eastern Washington, Idaho, and most of Montana today. This warning is due to anticipated erratic and gusty winds as a cold front approaches this afternoon. We will likely see smoke production on fires increase today with concentrations climbing or remaining high through at least early afternoon in most areas. Once the cold front passes, the winds are expected to shift from the west to the north/northwest. This will hopefully help flush out the smoke in many communities. Areas along the Continental Divide and points east will probably see the most improvement. It is possible that far western Montana will not see much improvement throughout this period as the gusty winds could usher in more smoke that may curve from northwest to southeast along the Montana/Idaho border.

The winds over Montana remain from the northwest on Saturday. Areas that do see improvement will likely have a good to moderate air quality day. Temperatures are expected to be much cooler on Saturday, hopefully helping to dampen fire activity here in Montana. A ridge of high pressure is then expected to build in on Sunday, bringing all of Montana downwind of the significant fire activity in Idaho and Washington once again. The warming temperatures and dry conditions will cause fire activity to increase in Montana during this period as well. Expect smoke to increase from west to east on Sunday. The severity of these impacts will depend on how active the fires are after the passage of the cold front.

Expect impacts ranging from [UNHEALTHY](#) to [VERY UNHEALTHY](#) to continue through the early afternoon. Conditions are expected to improve from west to east across the state this afternoon with the exception of far western Montana, which may see some brief improvement. However, smoke is more likely to continue to impact this area due to the proximity to the large fires in Idaho. Air quality is expected to deteriorate once again from west to east on Sunday as winds turn westerly once again under a ridge of high pressure.

### **Today's Summary**

Expect impacts ranging from [UNHEALTHY](#) to [VERY UNHEALTHY](#) to continue through the early afternoon. Conditions are expected to improve from west to east across the state this afternoon with the

exception of far western Montana, which may see some brief improvement. However, smoke is more likely to continue to impact this area due to the proximity to the large fires in Idaho. Air quality is expected to deteriorate once again from west to east on Sunday as winds turn westerly once again under a ridge of high pressure.

**An Air Quality Alert continues until 4PM August 21, 2015 for the following counties due to elevated particulate concentrations: Beaverhead, Big Horn, Broadwater, Carbon, Carter, Cascade, Custer, Deer Lodge, Fallon, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Park, Pondera, Powder River, Powell, Madison, Meagher, Mineral, Missoula, Ravalli, Rosebud, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Treasure, Wheatland, and Yellowstone.**

Air quality in Libby, Flathead Valley, Hamilton, and Lewistown is currently [\*\*VERY UNHEALTHY\*\*](#).

Air quality in Seeley Lake, Frenchtown, Missoula, Butte, Helena, Great Falls, Bozeman, Billings, Birney, Broadus, and West Yellowstone is currently [\*\*UNHEALTHY\*\*](#).

When air quality is [\*\*VERY UNHEALTHY\*\*](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [\*\*UNHEALTHY\*\*](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [\*\*UNHEALTHY FOR SENSITIVE GROUPS\*\*](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Another update will be posted around 4pm with an update to the air quality alerts.

The hazy skies continue across Montana today, with scenes like the one below in Ovando common across the state.



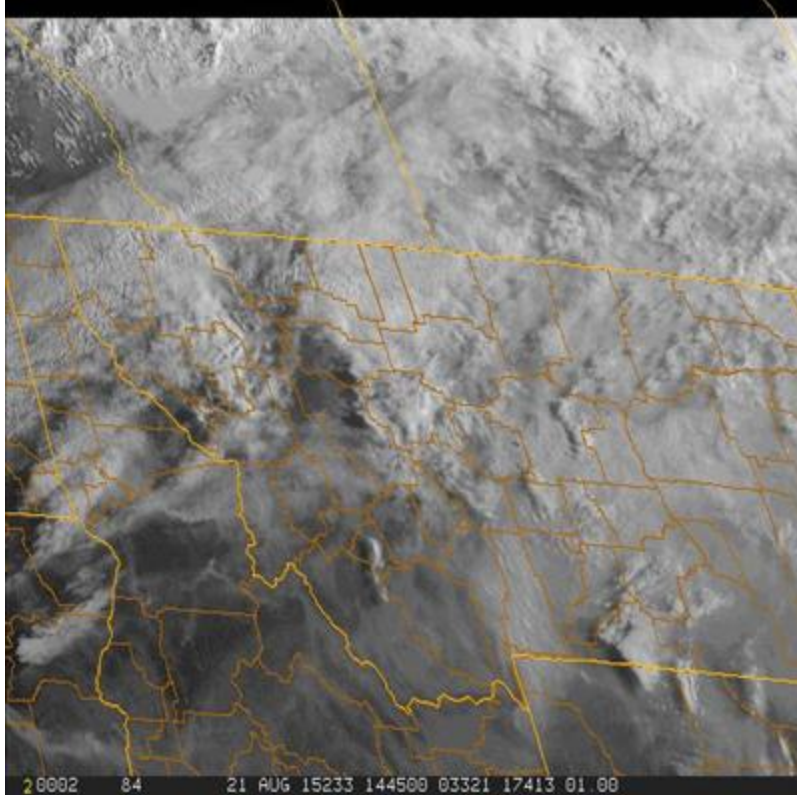
Source: [USFS](#)

Great Falls is also seeing significant smoke impacts this morning.



Source: [KTVQ](#)

Widespread smoke can still be seen on satellite this morning in Idaho and western Montana. More cloud cover is visible today in northern Montana. This unsettled weather may finally bring relief to most areas.



Source: [NWS](#)



Expect a surge in fire activity today due to red flag weather conditions across the northwest and Montana.



Source: [USFS](https://www.usfs.gov/)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's Health Effect Categories.

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	Libby Flathead Valley Hamilton Lewistown
<a href="#">Unhealthy</a>	Seeley Lake Frenchtown Missoula Helena Great Falls Butte Bozeman Billings Birney Broadus St. Mary (hourly conditions have improved significantly)

<a href="#">Unhealthy for Sensitive Groups</a>	
<a href="#">Moderate</a>	Sidney
<a href="#">Good</a>	Malta

***Wildfire Smoke Update for Friday, August 21, 2015 4:34 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=964>

**Today's Report and Forecast**

An Air Quality Alert continues until 9AM August 22, 2015 for the following counties due to elevated particulate concentrations: Beaverhead, Big Horn, Broadwater, Carbon, Carter, Cascade, Custer, Deer Lodge, Fallon, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Park, Pondera, Powder River, Powell, Madison, Meagher, Mineral, Missoula, Ravalli, Rosebud, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Treasure, Wheatland, and Yellowstone.

Given the expected improvement this evening, an update will be sent if conditions improve significantly before 10pm. Otherwise, the alert will be re-evaluated at 9AM tomorrow.

Air quality Hamilton is currently [HAZARDOUS](#).

Air quality in Flathead Valley, St. Mary, and Lewistown is currently [VERY UNHEALTHY](#).

Air quality in Seeley Lake, Frenchtown, Missoula, Butte, Helena, Great Falls, Bozeman, Billings, Birney, Broadus, and West Yellowstone is currently [UNHEALTHY](#).

When air quality is [HAZARDOUS](#), state and local health officials recommend that everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should remain indoors.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

A few updates to the previous discussion:

The air quality around the state remains poor this afternoon as we await a cold front from Canada. Some areas have seen hourly concentrations improve late this afternoon, including Seeley Lake, Butte, and Bozeman. However, most areas continue to see very high particulate levels. The cold front is expected to impact the state this evening and overnight. In the meantime, fire activity has increased under red flag conditions. The most significant impacts are in the Bitterroot valley where 24-hour cumulative air quality has reached [HAZARDOUS](#) levels. Elsewhere, air quality is between [UNHEALTHY](#) and [VERY UNHEALTHY](#). Northeast Montana continues to have the best air quality in the state, although satellite imagery shows significant smoke moving over the region. Most of this smoke is staying above ground level,

but 24-hour air quality has reached [\*\*UNHEALTHY FOR SENSITIVE GROUPS\*\*](#) in Sidney. Malta is our only monitor in the state with [\*\*GOOD\*\*](#) cumulative air quality, although concentrations have been increasing this afternoon.

The forecast remains on track for this evening. The cold front is expected to pass through beginning this evening and move quickly from west to east. We are starting to see thunderstorm activity move into Lincoln County so we may start to see some improvements soon. The winds are expected to shift from the west to the north after the front passes through. Areas along the Continental Divide and points east have the best chance of seeing significant clearing of all this smoke. It is possible that far western Montana will not see much improvement throughout this period as the gusty winds could usher in more smoke that may curve from northwest to southeast along the Montana/Idaho border.

The winds over Montana remain from the northwest on Saturday. Areas that do see improvement will likely have a good to moderate air quality day. Temperatures are expected to be much cooler on Saturday, hopefully helping to dampen fire activity here in Montana. A ridge of high pressure is then expected to build in on Sunday, bringing all of Montana downwind of the significant fire activity in Idaho and Washington once again. The warming temperatures and dry conditions will cause fire activity to increase in Montana during this period as well. Expect smoke to increase from west to east on Sunday. The severity of these impacts will depend on how active the fires are after the passage of the cold front.

Expect impacts ranging from [\*\*UNHEALTHY\*\*](#) to [\*\*HAZARDOUS\*\*](#) to continue through the evening. Conditions are expected to improve from west to east across the state this evening and overnight. Far western Montana may only see brief improvement due to the proximity to the large fires in Idaho. Air quality is expected to deteriorate once again from west to east on Sunday as winds turn westerly once again under a ridge of high pressure.

#### **Today's Summary**

No major changes to the forecast as we await the arrival of the cold front. We will hopefully see some improvement over the next 5 hours in most areas. Another update will be posted later this evening if any of the air quality alerts should be lifted.

**An Air Quality Alert continues until 9AM August 22, 2015 for the following counties due to elevated particulate concentrations: Beaverhead, Big Horn, Broadwater, Carbon, Carter, Cascade, Custer, Deer Lodge, Fallon, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Park, Pondera, Powder River, Powell, Madison, Meagher, Mineral, Missoula, Ravalli, Rosebud, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Treasure, Wheatland, and Yellowstone.**

**Given the expected improvement this evening, an update will be sent if conditions improve significantly before 10pm. Otherwise, the alerts will be re-evaluated at 9AM tomorrow.**

**Air quality Hamilton is currently [\*\*HAZARDOUS\*\*](#).**

**Air quality in Flathead Valley, St. Mary, and Lewistown is currently [\*\*VERY UNHEALTHY\*\*](#).**

**Air quality in Seeley Lake, Frenchtown, Missoula, Butte, Helena, Great Falls, Bozeman, Billings, Birney, Broadus, and West Yellowstone is currently [\*\*UNHEALTHY\*\*](#).**

**When air quality is [\*\*HAZARDOUS\*\*](#), state and local health officials recommend that everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should remain indoors.**

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

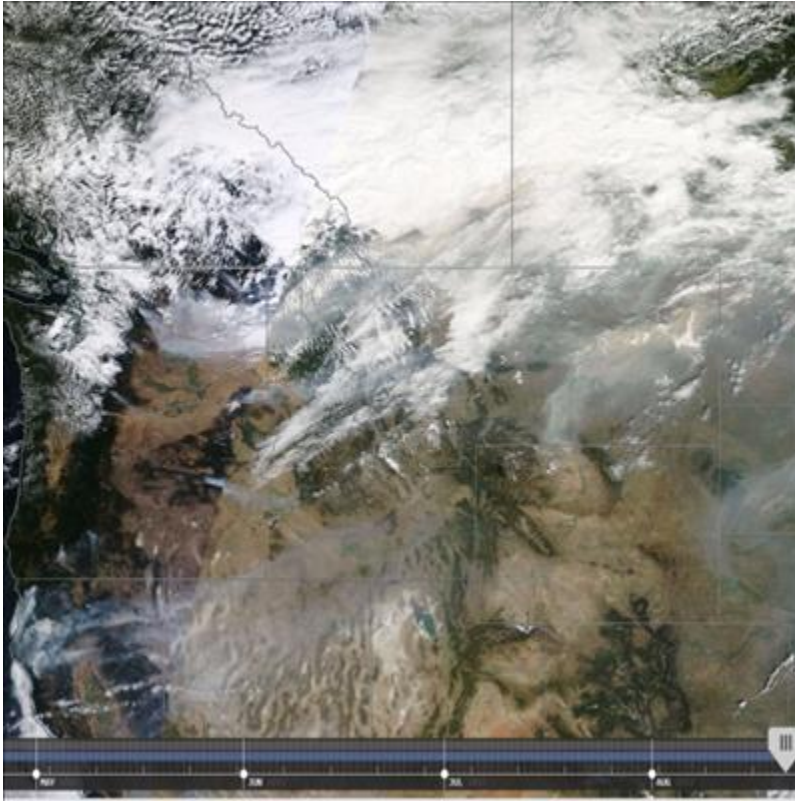
When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

Visibility is poor in Helena this afternoon as we await the cold front to help clear out some of the smoke.



Source: [MTDEQ](#)

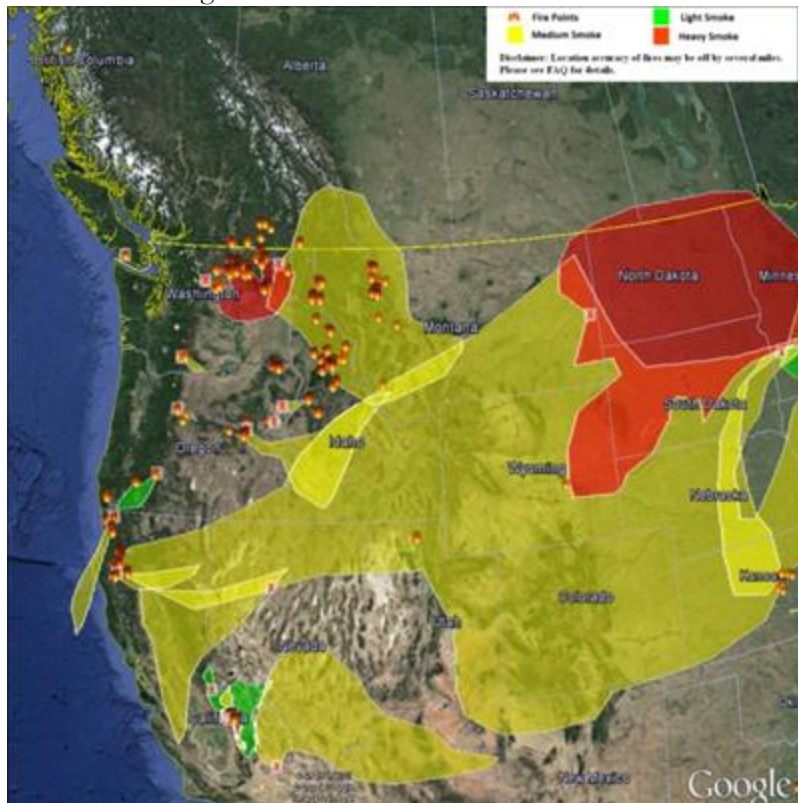
Significant smoke remains over Montana today due to fires in Washington, Idaho, and here in Montana.



Source: [NASA](#)

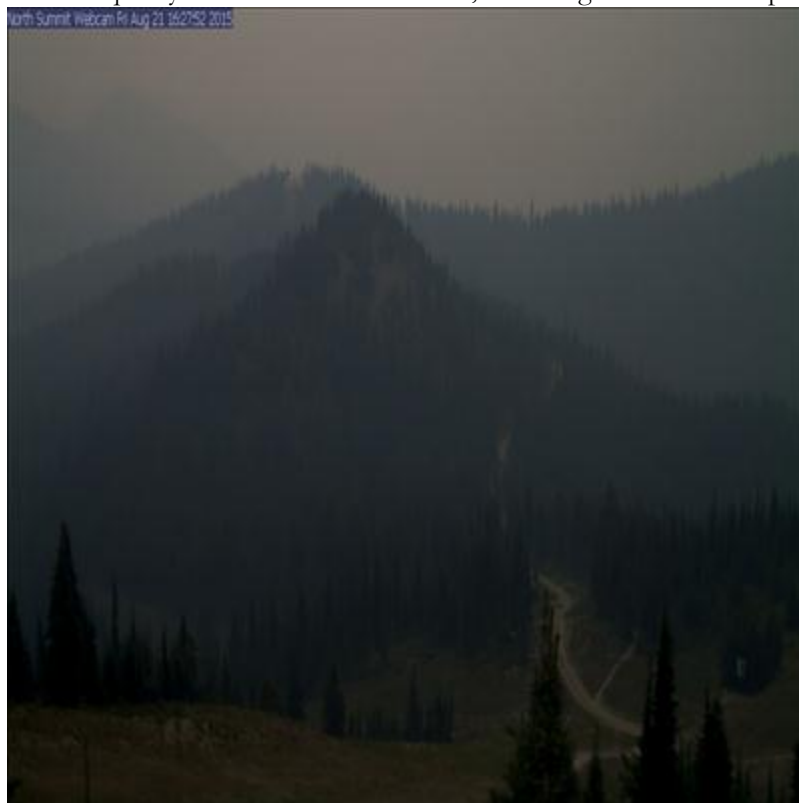


Satellite analysis is showing moderate smoke over the state, although cloud cover is obscuring much of the smoke from being detected.



Source: [NOAA](#)

Poor air quality continues near Whitefish, where significant haze is present.



Source: [Ski Whitefish](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
<a href="#">Hazardous</a>		Hamilton
<a href="#">Very Unhealthy</a>		Flathead Valley St. Mary Lewistown
<a href="#">Unhealthy</a>		Libby Seeley Lake Missoula Frenchtown Butte Helena Great Falls Bozeman West Yellowstone Billings Birney Broadus
<a href="#">Unhealthy for Sensitive Groups</a>		Sidney

<a href="#">Moderate</a>	
<a href="#">Good</a>	Malta

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1700Z August 21, 2015

SMOKE:

Western/Central US and Canada:

A large area of light to heavy density of smoke is visible extending across the country this morning, originating from the wildfires currently burning in British Columbia, Washington, Idaho, Montana, Oregon, and California. The heaviest area of smoke is located in in North and South Dakota, Wyoming, Minnesota, and Wisconsin, moving eastward. Medium density smoke is visible extending eastward from California to Wisconsin, with a separate plume moving into Nevada and Arizona from the "Rough" wildfire complex located in Fresno County, California. Light to medium density smoke is visible detaching and moving east off into Alberta, southern Manitoba and Ontario. Due to the visual limitations of GOES-W, it is difficult to determine the extent of the smoke moving east, but the plume is making its way east beyond Indiana and as far south as Arkansas.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H211712.html>

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AUGUST 22, 2015

**PM2.5 Location(s):** Hamilton

**Synopsis:** After a brief reprieve in smoke impacts due to a cold front moving through the state, smoke moved back into western Montana in the evening. Smoke still lingered in eastern Montana as the cold front moved across the state.

**Documentation:**

*Wildfire Smoke Update for Saturday, August 22, 2015 9:05 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=965>

## Today's Report and Forecast

**The Air Quality Alert has been cancelled for all counties due to decreasing hourly concentrations and improved visibility.**

**Note:** The [Today's Air](#) map shows hourly concentrations, unless that concentration exceeds 15 ug/m3. If the hourly level is higher than that, the most significant health effect category will be displayed. The 24-hour average values will take some time to decrease, which may cause some cities to display unhealthy air quality on the [Today's Air](#) map. Please be sure to click on the individual cities to see current hourly conditions.

First the good news:

We are finally seeing clear blue skies this morning after days of smoky conditions! We started to see concentrations come down around 9pm last night near Libby, Flathead and St. Mary, then Helena and Lewistown around 11pm. The Missoula and Butte areas have taken a little longer to feel the effects of this front as the cold air and winds made their way into southwestern Montana. Hamilton, which consistently saw the worst smoke impacts over the course of the last week has seen hourly concentrations drop to 14 ug/m3 this morning after a high value of 232 ug/m3 yesterday. The front is moving through far eastern Montana now, with concentrations decreasing in Sidney, Broadus, and Birney the last couple of hours. Hourly

concentrations in almost all areas have reached [GOOD](#) levels this morning, with West Yellowstone being the only area with [MODERATE](#) hourly concentrations.

The cold temperatures will help limit fire behavior here in Montana today. It looks like most areas will have good to moderate air quality for at least the morning, so be sure to enjoy the fall-like weather!

Now the bad news:

As the smoke gets pushed to the south from the northerly winds, West Yellowstone has seen concentrations increase over the past 12 hours. 24-hour average air quality is currently [UNHEALTHY FOR SENSITIVE GROUPS](#) and hourly concentrations are at [MODERATE](#) levels. These impacts are expected to linger throughout the day.

Unfortunately, a large amount of smoke is still present in Idaho and Washington, where air quality is still [HAZARDOUS](#) in places. The northerly winds over Montana that helped drag down the cold air from Canada will not last long. A ridge of high pressure will be building in from the west, creating light westerly winds across the region over the next 24 hours. Smoke is likely to impact areas along the Montana/Idaho border first, possibly this afternoon before moving further east on Sunday and Monday. This ridge of high pressure is expected to impact the state for much of the week. The stagnant conditions will trap smoke, causing widespread impacts across the region. The level of smoke will depend on the fire activity in Washington and Idaho which, as of now, looks to remain active throughout this period.

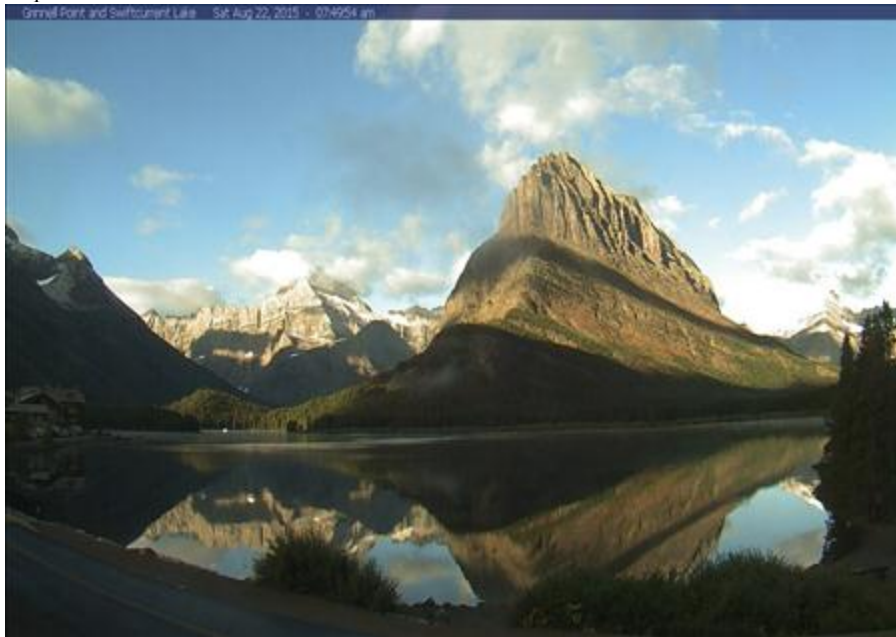
Conclusion:

Enjoy the good air quality now because we will likely see the hazy skies and smoke impacts return over the next 24 hours.

### **Today's Summary**

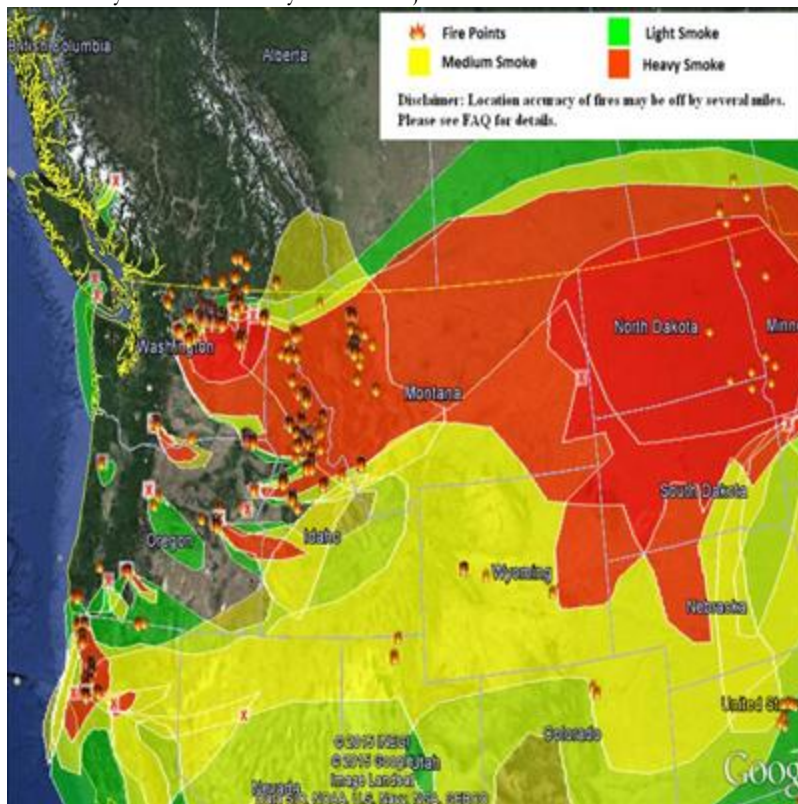
Air quality has improved in most locations due to the strong cold front that moved through the state overnight. The Air Quality Alert has been lifted in all counties due to the improving conditions. Some impacts remain in West Yellowstone as smoke is pushed to the south. Enjoy the good air while it lasts because impacts are expected to move back in as early as this afternoon in western Montana and Sunday or Monday across the state.

A welcome sight this morning in Glacier National Park! A stunning view in Many Glacier as air quality has improved in most of the state.



Source: [NPS](#)

Yesterday's satellite analysis shows just how dense the smoke was over the state yesterday afternoon.



Source: [NOAA](#)



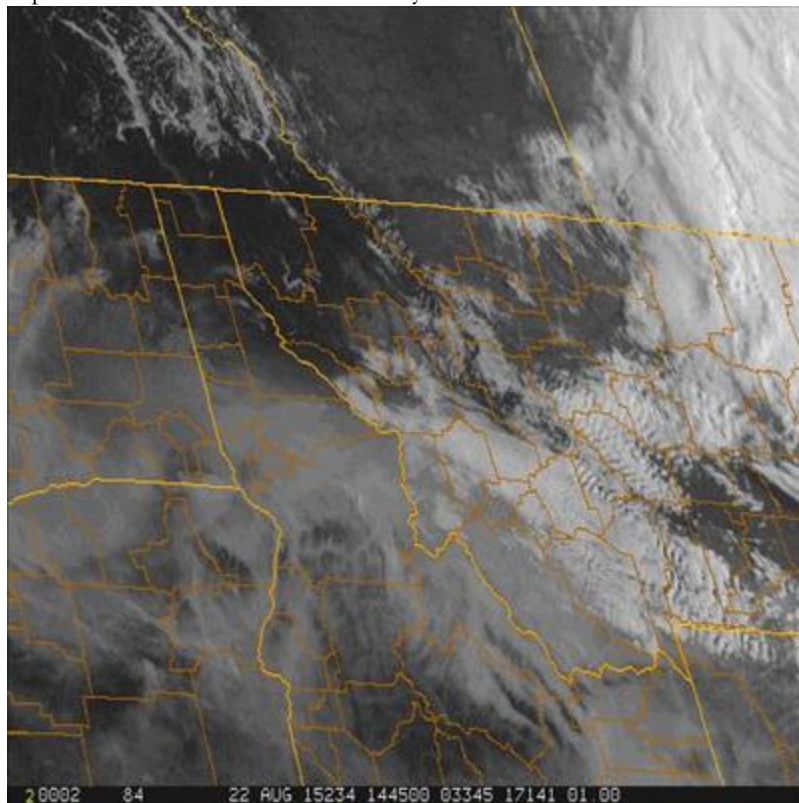


The fires to our west are expected to send smoke into the state later this weekend.









Source: [USFS](http://www.usfs.gov)

The smoke is still present across Idaho and a sliver of southwest Montana this morning. This smoke is expected to move back in later today and tomorrow.



Source: [NWS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
 <a href="#">Hazardous</a>	
 <a href="#">Very Unhealthy</a>	
 <a href="#">Unhealthy</a>	
 <a href="#">Unhealthy for Sensitive Groups</a>	West Yellowstone
 <a href="#">Moderate</a>	
 <a href="#">Good</a>	24-hour averages remain high in the state, but hourly levels have decreased at all other reporting sites.

***Wildfire Smoke Update for Saturday, August 22, 2015 6:19 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=966>

**Today's Report and Forecast**

An Air Quality Alert has been issued until 9AM August 23, 2015 for the following counties due to elevated particulate concentrations: Beaverhead, Deer Lodge, Granite, Madison, Ravalli, and Silver Bow.

Air quality in Hamilton, Butte, and West Yellowstone is currently **UNHEALTHY**.

When air quality is **UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

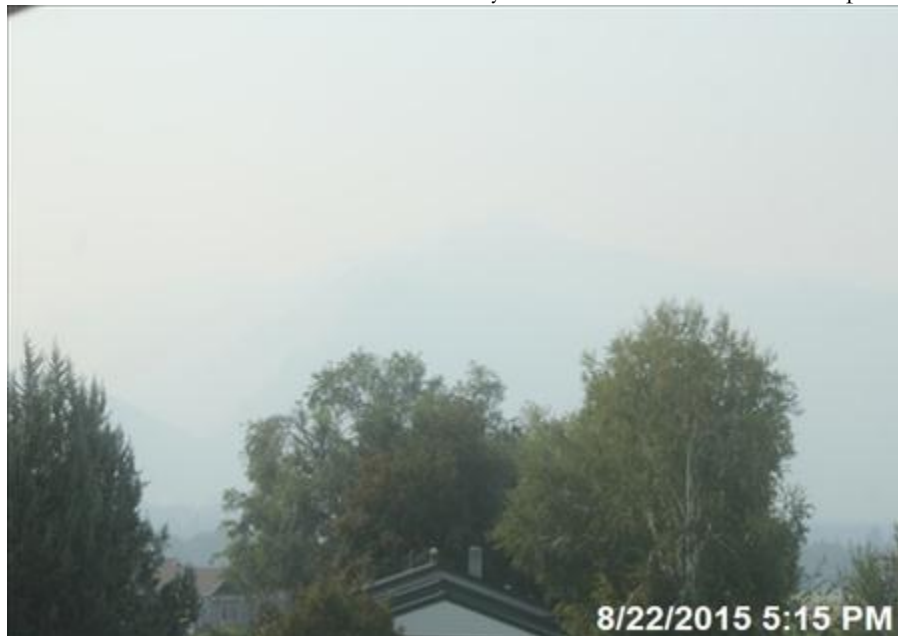
Smoke is moving back into southwest Montana this afternoon after conditions improved overnight and this morning. Afternoon satellite shows smoke from the Bitterroot running east to Butte and Bozeman, and then south to West Yellowstone. Hourly concentrations in Hamilton have once again reached **UNHEALTHY** levels. Hourly concentrations are **UNHEALTHY FOR SENSITIVE GROUPS** in West Yellowstone, and **MODERATE** in Butte. Concentrations in Missoula are fluctuating between **GOOD** and **MODERATE** levels. Elsewhere, hourly concentrations remain low. 24-hour concentrations are **UNHEALTHY** in Hamilton, Butte, and West Yellowstone.

A couple fires in Montana are visible on satellite this afternoon. The Bear Creek fire in the Flathead National Forest has increased in size dramatically over the past few days. This fire is displaying a large amount of smoke to the east of the Flathead Valley. Smoke is also visible in the vicinity of the Thompson Complex near Glacier National Park. Smoke is widespread in Idaho and Washington as well. As mentioned in the update this morning, this smoke will be moving further east into Montana over the next 24 to 48 hours as winds turn westerly under a ridge of high pressure. In addition to the smoke impacts in southwest Montana, hazy skies and increasing particulate concentrations are expected by Sunday evening across most areas of Montana, beginning in the west and reaching the east by Sunday evening. This ridge is expected to impact Montana throughout the week, with concentrations rising as smoke gets trapped under the large stable air mass.

**Today's Summary**

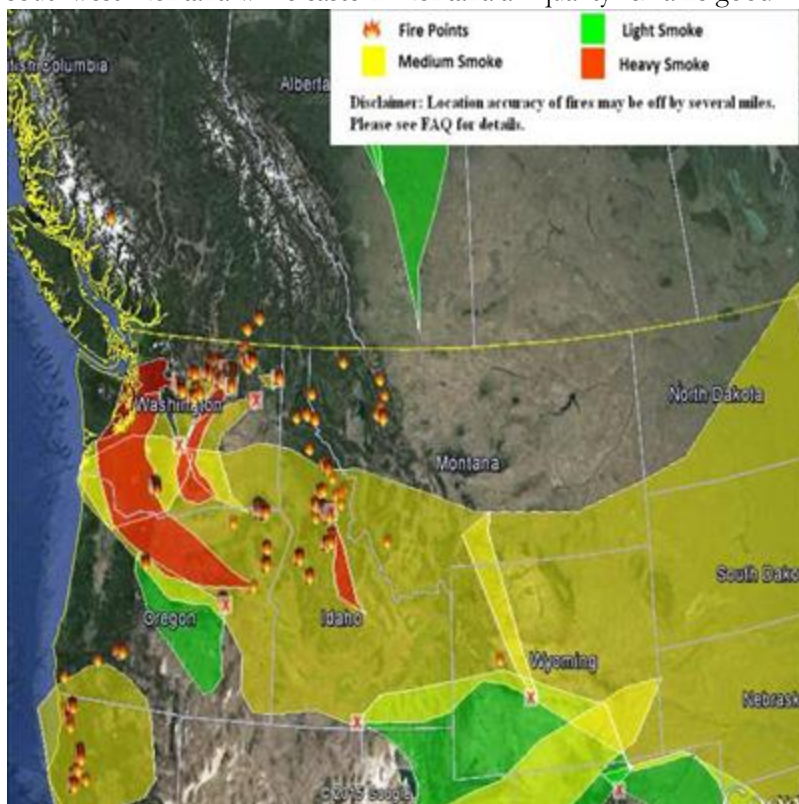
Air quality remains **GOOD** in northwest, central and eastern Montana this afternoon. Unfortunately, the smoke has already moved back into southwest Montana. Air quality impacts have returned to the Bitterroot Valley, Butte, and Bozeman, while impacts have lingered throughout the day in West Yellowstone. Smoke impacts are expected to spread to the rest of Montana over the next day or two, as a ridge of high pressure dominates the weather for much of the week.

Smoke has returned to the Bitterroot Valley this afternoon after a brief improvement this morning.



Source: [USFS](#)

Satellite analysis shows smoke in the southern portion of the state. Ground concentrations have increased in southwest Montana while eastern Montana air quality remains good.

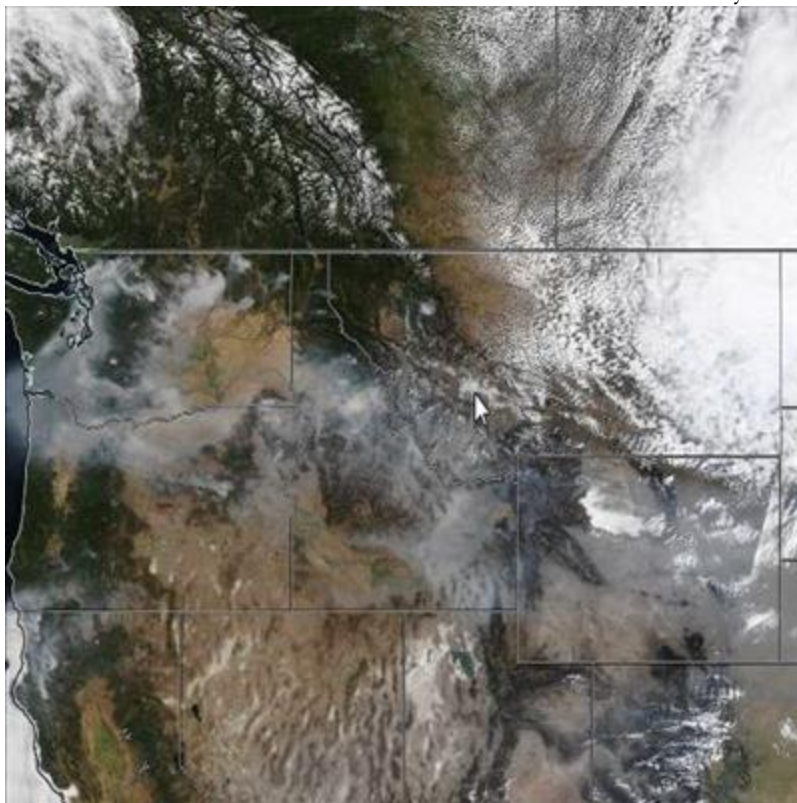


Source: [NOAA](#)





The smoke plume over southwest Montana is clearly visible on the afternoon satellite. The smoke plume from the Bear Creek fire is also visible east of the Flathead Valley.



Source: [NASA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Hamilton Butte West Yellowstone
<a href="#">Unhealthy for Sensitive Groups</a>	Missoula Bozeman
<a href="#">Moderate</a>	
<a href="#">Good</a>	24-hour concentrations are still declining, but hourly concentrations remain good at all other reporting sites.

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1700Z August 22, 2015

### SMOKE:

Western/Central US and Western/Central Canada:

An enormous area of light to heavy smoke is visible throughout the western US, as it makes its way into Canada and the Great Lakes region. The heaviest smoke is visible is observed in Oregon, Washington, Idaho, Minnesota, Wisconsin, Michigan, and Ontario. Medium-density smoke is visible through Saskatchewan, Manitoba, Nunavut, Ontario, and Quebec as it advances eastward, as well as a majority of the western US including California, Nevada, Arizona, Oregon, Washington, Idaho, Montana, Utah, Wyoming, Colorado, North and South Dakota, Kansas, Nebraska, Oklahoma, Missouri, Iowa, Minnesota, Ontario, Wisconsin, and Michigan. Light smoke is observed in Oregon, Nevada, Idaho, Utah, Wyoming, Arizona, Colorado, New Mexico, Texas, Oklahoma, and Arkansas. Additionally, single detached plume of light smoke is visible moving east through the NW Territories and Alberta into Saskatchewan. This smoke originates from the Numerous wildfire complexes that continue to burn in the western US.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H221701.html>

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AUGUST 23, 2015

**PM2.5 Location(s):** Butte, Flathead, Frenchtown, Hamilton, Libby, Missoula

**PM10 Location(s):** Columbia Falls

**Synopsis:** Smoke continued to move into western Montana from fire activity in Washington, Idaho, and Montana. Conditions worsened throughout the day.

### Documentation:

*Wildfire Smoke Update for Sunday, August 23, 2015 6:09 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=967>

### Today's Report and Forecast

An Air Quality Alert has been expanded until 9AM August 24, 2015 to include the following counties due to elevated particulate concentrations and/or rapidly increasing concentrations above national ambient air quality standards: Beaverhead, Broadwater, Cascade, Deer Lodge, Gallatin, Glacier, Granite, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Lincoln, Meagher, Park, Pondera, Powell, Madison, Mineral, Missoula, Ravalli, Sanders, Silver Bow, and Teton.

Air quality in Flathead Valley is currently **VERY UNHEALTHY**.

Air quality in Hamilton, Butte, and Frenchtown is currently **UNHEALTHY**.

Air quality in Missoula, Seeley Lake, Bozeman, West Yellowstone, and Great Falls is currently **UNHEALTHY FOR SENSITIVE GROUPS**.

Air quality in Libby, Lewistown, St. Mary, and Helena is currently **MODERATE**.

When air quality is **VERY UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Update 6PM: As expected, the smoke that was visible on satellite this morning has been settling to the ground throughout western Montana. Concentrations have been increasing in many locations, prompting the air quality alert to be expanded to include all of western Montana. Fire activity has also increased significantly here in Montana, with the Bear Creek fire east of the Flathead Valley creating the [VERY UNHEALTHY](#) conditions in Kalispell throughout the day. Conditions in the Flathead Valley briefly improved when winds shifted to the south but concentrations are increasing once again.

Air quality impacts, ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [VERY UNHEALTHY](#), are expected throughout the week in western Montana. As the winds turn to more westerly, these impacts will spread further east across the state. Eastern Montana is expected to see hazy skies and decreased air quality Sunday night into Monday. The air quality alert will likely be extended and expanded as the impacts spread.

#### Today's Summary

Air quality impacts have deteriorated across western and central Montana this afternoon. Smoky skies and decreased air quality are expected throughout the week.

An Air Quality Alert has been expanded until 9AM August 24, 2015 to include the following counties due to elevated particulate concentrations and/or rapidly increasing concentrations above national ambient air quality standards: Beaverhead, Broadwater, Cascade, Deer Lodge, Gallatin, Glacier, Granite, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Lincoln, Meagher, Park, Pondera, Powell, Madison, Mineral, Missoula, Ravalli, Sanders, Silver Bow, and Teton.

Air quality in Flathead Valley is currently [VERY UNHEALTHY](#).

Air quality in Hamilton, Butte, and Frenchtown is currently [UNHEALTHY](#).

Air quality in Missoula, Seeley Lake, Bozeman, West Yellowstone, and Great Falls is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

Air quality in Libby, Lewistown, St. Mary, and Helena is currently [MODERATE](#).

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.



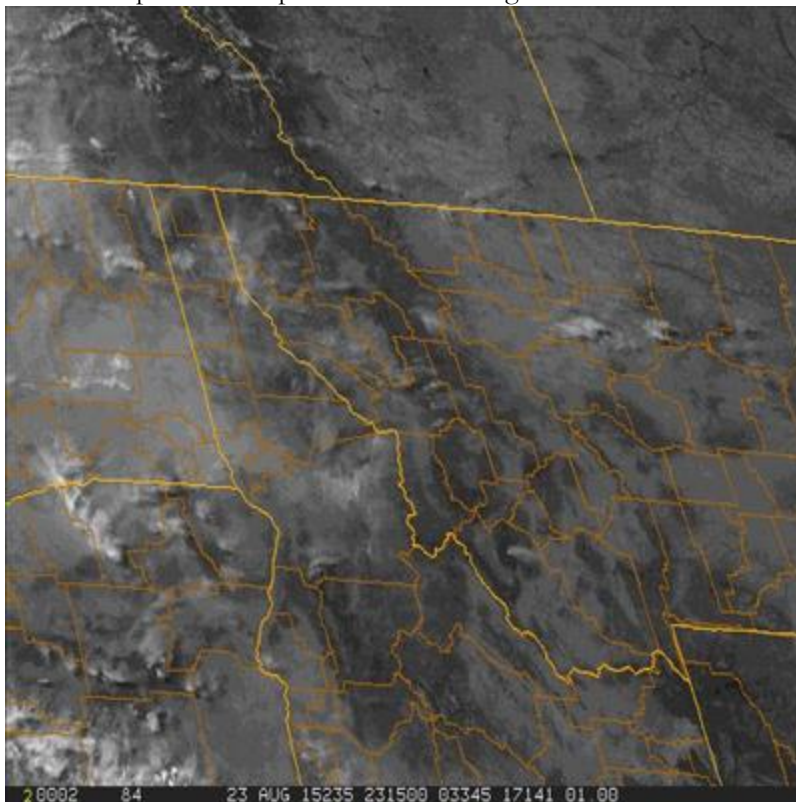


The Flathead Valley is seeing significant air quality impacts this afternoon.



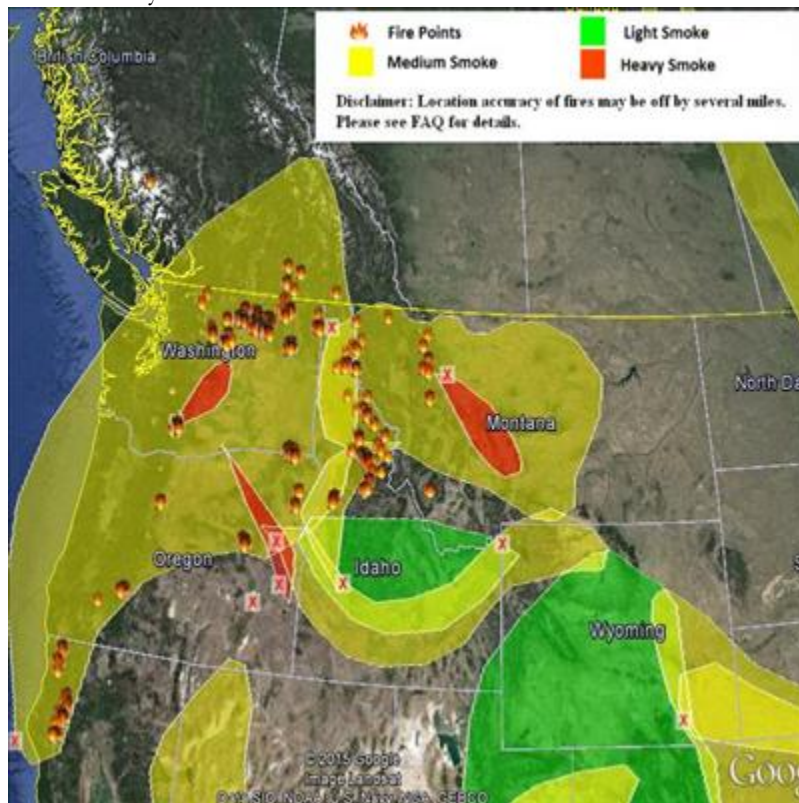
Source: [Explore Whitefish](http://www.ExploreWhitefish.com)

Many individual fires can be seen in western Montana on satellite this afternoon, including the Bear Creek fire in southern Flathead County. A large amount of smoke can also be seen in Washington and Idaho. This smoke is expected to impact Montana throughout the week.



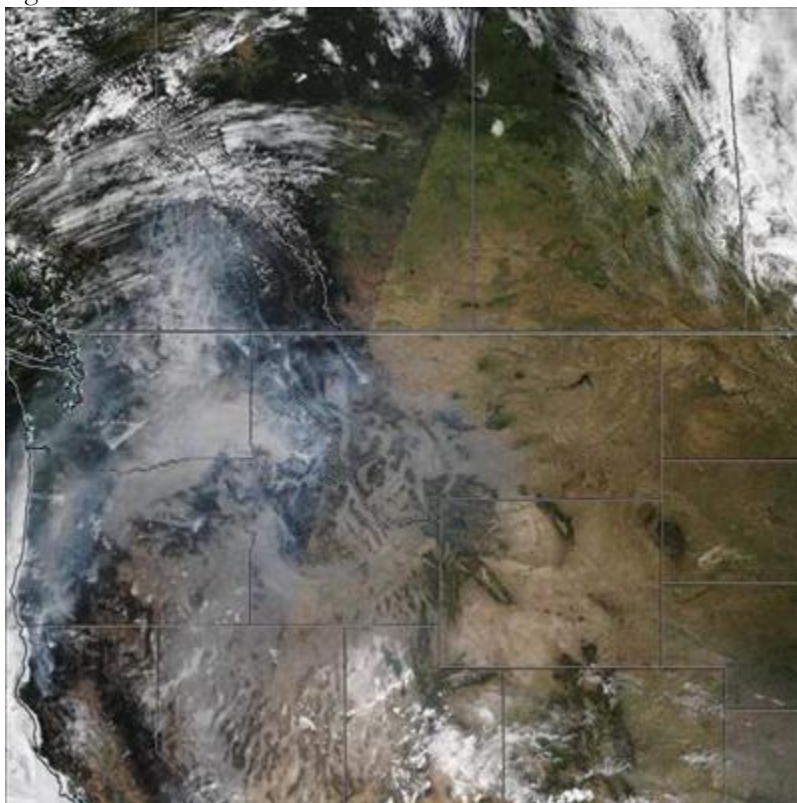
Source: [NWS](http://www.NWS.gov)

Satellite analysis shows moderate to dense smoke across Montana today.



Source: [NOAA](#)

Significant smoke can be seen on satellite across western Montana this afternoon.



Source: [NOAA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	Flathead Valley
	<a href="#">Unhealthy</a>	Hamilton Butte Frenchtown (1-hr)
	<a href="#">Unhealthy for Sensitive Groups</a>	Missoula Seeley Lake Bozeman West Yellowstone Great Falls
	<a href="#">Moderate</a>	Libby Helena St. Mary Lewistown (1-hr)
	<a href="#">Good</a>	All other reporting sites.

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1700Z August 23, 2015

### SMOKE

Western/Central US and Western Canada:

Enormous areas of smoke, ranging from light to heavy densities, are visible across a majority of the western and central US. The heaviest smoke in the US is visible originating from the wildfire complexes in Washington, Oregon, and Idaho. Medium-density smoke is visible consistently through California and Nevada (moving north), Oregon (moving NE), Washington (moving north and east), British Columbia (moving north), and through Idaho and Montana, where the smoke continues eastward through Utah, Wyoming, Colorado, New Mexico, Nebraska, Kansas, Oklahoma, Missouri, Iowa, Minnesota, North Dakota, Wisconsin, and Michigan. Light smoke is visible in Idaho, Utah, Wyoming, Colorado, Texas, Oklahoma, and Coahuila, Mexico. This pattern of smoke continues to move NE across the border into central and eastern Canada. This smoke originates from the wildfires continuing to burn in California, Oregon, Washington, British Columbia, Idaho, and Montana.

A separate plume of light density smoke is visible moving SE in the NW Territories border, mirroring the Mackenzie River. This remnant smoke originates from the fires currently burning in Siberia.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H231707.html>

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AUGUST 24, 2015

**PM2.5 Location(s):** Flathead, Frenchtown, Hamilton, Helena, Libby, Missoula, Ncore

**PM10 Location(s):** Thompson Falls, Kalispell, Whitefish, Columbia Falls, Libby, Missoula

**Synopsis:** Prolonged smoke impacts expected due to a large ridge of high pressure over the western U.S. and significant fire activity in Montana and neighboring states.

### Documentation:

*Wildfire Smoke Update for Monday, August 24, 2015 9:35 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=968>

### Today's Report and Forecast

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Broadwater, Carbon, Cascade, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Lincoln, Meagher, Park, Pondera, Powell, Madison, Mineral, Missoula, Musselshell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Wheatland, and Yellowstone.

Air quality in Flathead Valley and Libby is currently [\*\*VERY UNHEALTHY\*\*](#).

Air quality in Seeley Lake, Frenchtown, Missoula, Hamilton, Butte, Helena, Great Falls, St. Mary, and Bozeman is currently [\*\*UNHEALTHY\*\*](#).

Air quality in West Yellowstone, Lewistown, and Billings is currently [\*\*UNHEALTHY FOR SENSITIVE GROUPS\*\*](#).

When air quality is [\*\*VERY UNHEALTHY\*\*](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity;



everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Smoke continues to dominate the skies across most of Montana today. Air quality impacts remain significant in western and central Montana. The most significant impacts are in northwest Montana, where 24-hour cumulative air quality is currently [VERY UNHEALTHY](#) in the Flathead Valley. The 8-hour average air quality is also [VERY UNHEALTHY](#) in Libby, where concentrations have been increasing throughout the morning. 24-hour cumulative air quality is [UNHEALTHY](#) in Seeley Lake, Frenchtown, Missoula, Hamilton, Butte, Helena, Great Falls, St. Mary, and Bozeman, and [UNHEALTHY FOR SENSITIVE GROUPS](#) in West Yellowstone, Lewistown, and Billings. The smoke has remained above ground level for now in eastern Montana, where air quality is currently in [GOOD](#) in Malta, Sidney, Birney, and Broadus, although the skies are fairly hazy.

The smoke is expected to continue for much of the week as Montana remains under a ridge of high pressure. As the ridge strengthens, the winds aloft will shift more to the southwest. This may help redirect some of the dense smoke from Washington away from Montana. However, smoke from the large fires in Idaho and western Montana will continue to cause smoke impacts. The shift to southwest winds will also increase the chance of afternoon thunderstorms towards the end of the week. These storms may create brief improvement in some areas, but will also prompt new fire weather risks. Smoke will be settling into the valleys each night under the ridge, likely causing impacts to increase in severity in the late afternoon across western Montana.

It is difficult to pinpoint the exact fires causing the smoke. Under the ridge of high pressure, the smoke is spreading over a large area, with individual plumes masked by the widespread smoke. There are currently 46 large, uncontained fires burning between Oregon, Washington, Idaho and Montana, along with numerous other smaller blazes. It doesn't look like the extreme fire behavior will be slowing down any time soon, as red flag warnings remain in place across the region.

Expect air quality ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [VERY UNHEALTHY](#) across western and central Montana. Eastern Montana will likely see ground level impacts increase over the next couple days as well. Impacts may reach [HAZARDOUS](#) levels at times as smoke gets trapped in the valleys under the stable air mass.

### **Today's Summary**

Air quality impacts ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [HAZARDOUS](#) are likely to continue for much of the week in western and central Montana. The air quality alert has been issued until further notice, as a significant improvement is not expected through at least mid-week, if not longer. Please use caution when planning outdoor activities.

**An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Broadwater, Carbon, Cascade, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Lincoln, Meagher, Park, Pondera, Powell, Madison, Mineral, Missoula, Musselshell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Wheatland, and Yellowstone.**



Air quality in Flathead Valley and Libby is currently [VERY UNHEALTHY](#).

Air quality in Seeley Lake, Frenchtown, Missoula, Hamilton, Butte, Helena, Great Falls, St. Mary, and Bozeman is currently [UNHEALTHY](#).

Air quality in West Yellowstone, Lewistown, and Billings is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

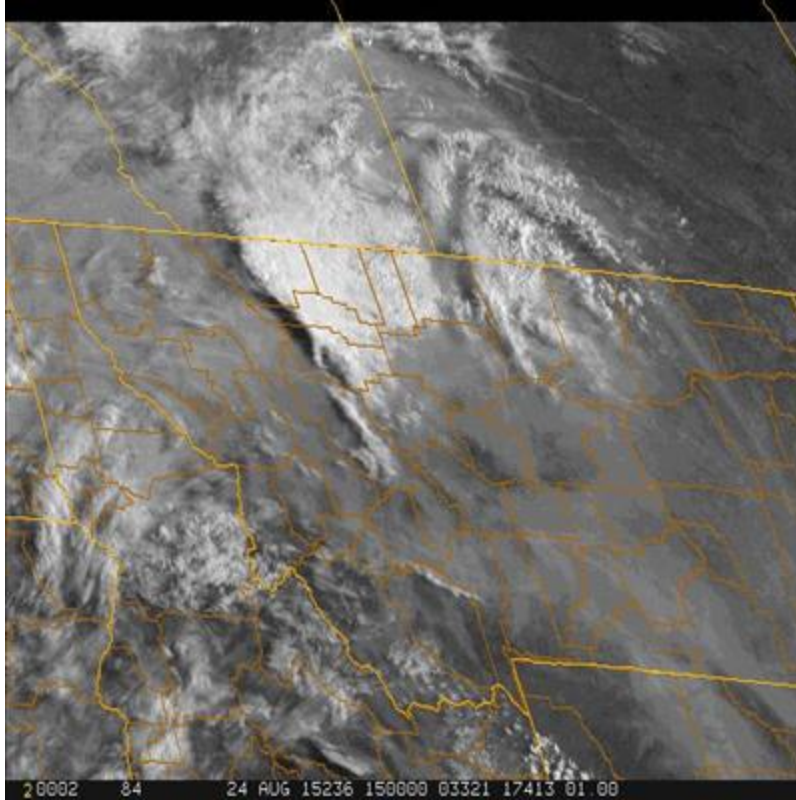
When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

The view in Butte is typical across much of western and central Montana this morning, where air quality impacts are widespread.



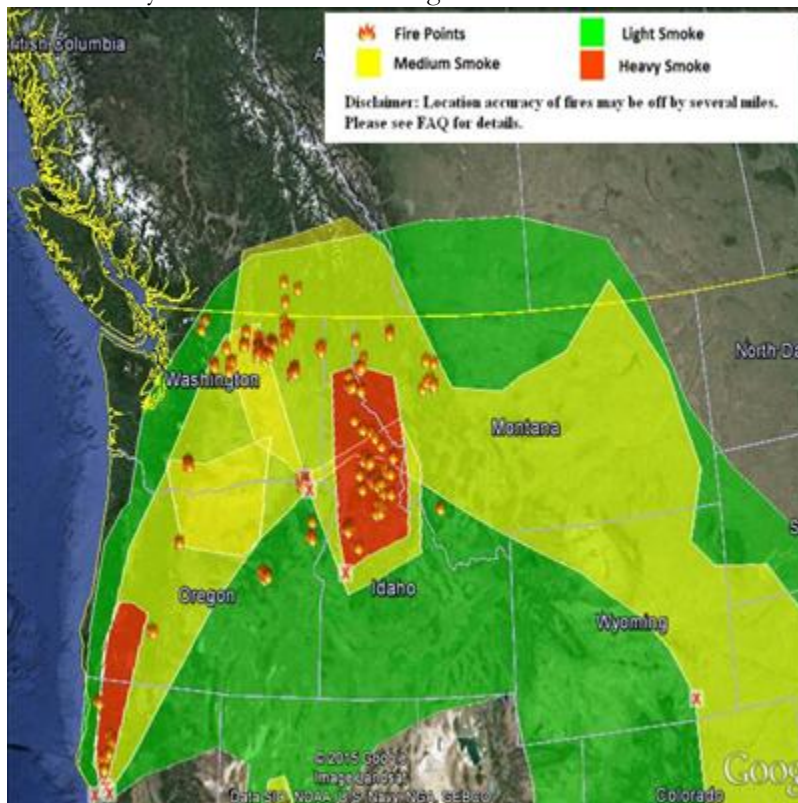
Source: [KTVQ](#)

Smoke is visible across most of the state this morning, with the most significant impacts in northwest Montana.



Source: [NWS](#)

Satellite analysis continues to show significant smoke over the state.



Source: [NOAA](#)

Fires remain active across eastern Washington, Idaho and western Montana.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	Flathead Valley Libby (8-hr)
	<a href="#">Unhealthy</a>	Seeley Lake Frenchtown Missoula Hamilton Butte Helena Great Falls St. Mary Bozeman
	<a href="#">Unhealthy for Sensitive Groups</a>	West Yellowstone Lewistown Billings
	<a href="#">Moderate</a>	

Good

Sidney  
Malta  
Birney  
Broadus

*Wildfire Smoke Update for Monday, August 24, 2015 3:45 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=969>

#### Today's Report and Forecast

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Broadwater, Carbon, Cascade, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Lincoln, Meagher, Park, Pondera, Powell, Madison, Mineral, Missoula, Musselshell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Wheatland, and Yellowstone.

Air quality in Flathead Valley and Libby is currently VERY UNHEALTHY.

Air quality in Seeley Lake, Frenchtown, Missoula, Hamilton, Butte, Helena, Great Falls, St. Mary, and Bozeman is currently UNHEALTHY.

Air quality in West Yellowstone, Lewistown, and Billings is currently UNHEALTHY FOR SENSITIVE GROUPS.

When air quality is VERY UNHEALTHY, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is UNHEALTHY, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is UNHEALTHY FOR SENSITIVE GROUPS, state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Air quality impacts continue this afternoon across western and central Montana. We are still seeing the worst impacts in Northwest Montana, where hourly concentrations have increased to VERY UNHEALTHY levels in the Flathead Valley. While the 24-hour cumulative impacts in Flathead Valley are still at VERY UNHEALTHY levels, the hourly concentrations have been trending towards HAZARDOUS cumulative impacts throughout the day. In Libby, the concentrations have remained more stable, with 24-hour cumulative impacts remaining VERY UNHEALTHY. Elsewhere, 24-hour cumulative impacts are holding steady at UNHEALTHY levels in St. Mary, Great Falls, Helena, Bozeman, Butte, Hamilton, Missoula, Frenchtown, and Seeley Lake, and UNHEALTHY FOR SENSITIVE GROUPS in West Yellowstone, Lewistown and Billings. Air quality impacts in Malta, Sidney, Birney, and Broadus remain GOOD.

We will continue to see impacts throughout the week. As the ridge of high pressure strengthens over the area, winds will shift to the southwest, creating a slightly increased risk of afternoon showers and thunderstorms towards the middle to end of the week. These storms may help improve air quality in some places due to the increasing winds and possible precipitation while also increasing fire risk. There is some indication that a trough of low pressure will move into the western U.S. over the weekend or early next week. It is too early to tell what impact this will have on local fires and smoke impacts. I will continue to watch this system as the



week progresses.

### **Today's Summary**

Air quality impacts ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [HAZARDOUS](#) are likely to continue for much of the week in western and central Montana. The air quality alert has been issued until further notice, as a significant improvement is not expected through at least mid-week, if not longer. Please use caution when planning outdoor activities.

**An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Broadwater, Carbon, Cascade, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Lincoln, Meagher, Park, Pondera, Powell, Madison, Mineral, Missoula, Musselshell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Wheatland, and Yellowstone.**

Air quality in Flathead Valley and Libby is currently [VERY UNHEALTHY](#).

Air quality in Seeley Lake, Frenchtown, Missoula, Hamilton, Butte, Helena, Great Falls, St. Mary, and Bozeman is currently [UNHEALTHY](#).

Air quality in West Yellowstone, Lewistown, and Billings is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Significant haze and air quality impacts are present at Lake McDonald in Glacier National Park this afternoon. Concentrations in the Flathead Valley have been increasing throughout the day and may reach Hazardous levels.



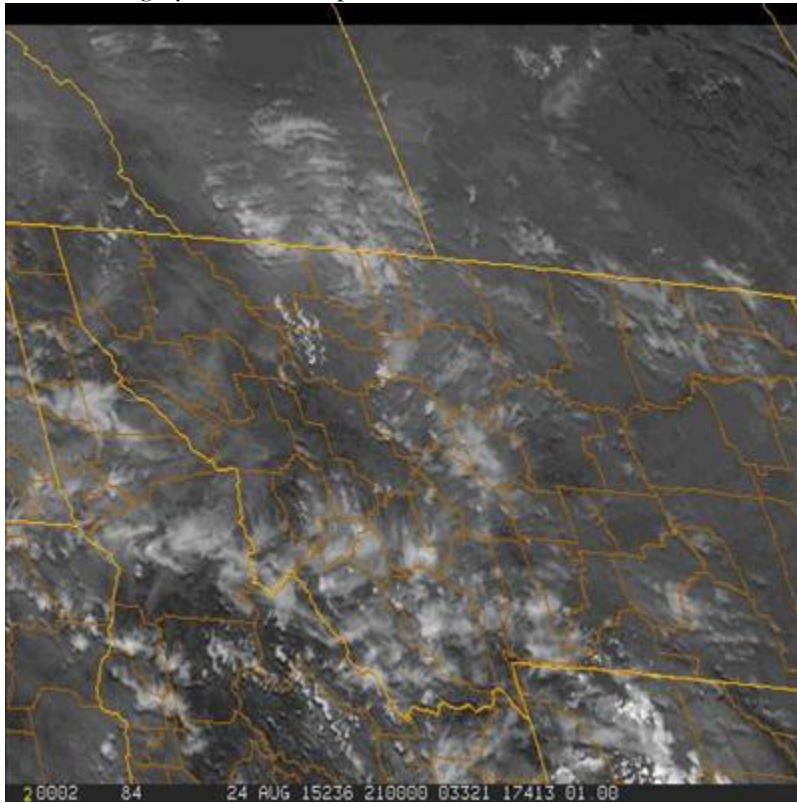
Source: [NPS](#)

Conditions are also poor in Polson, MT this afternoon.



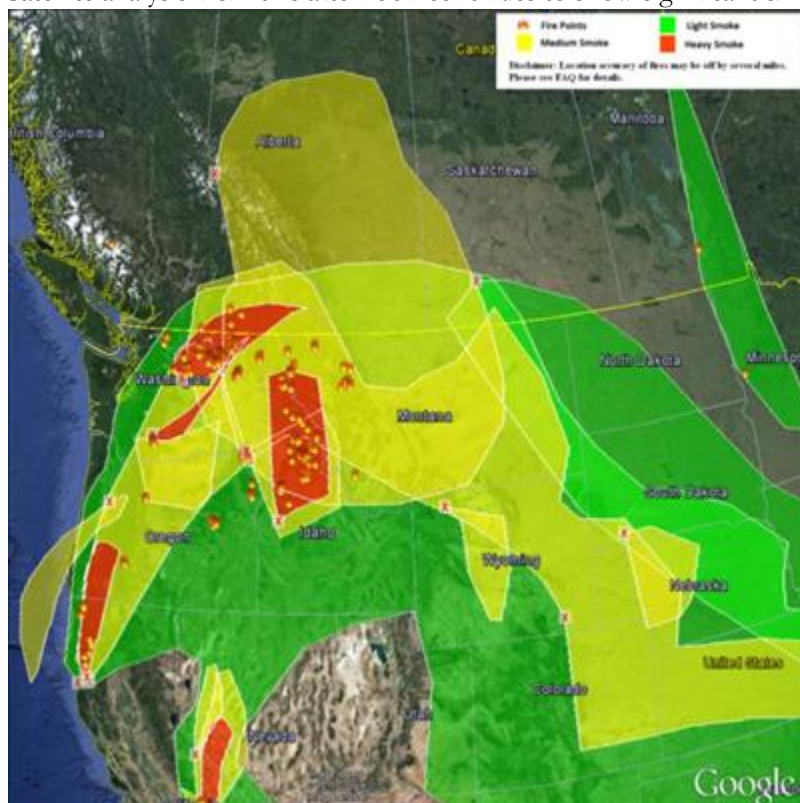
Source: [KTVQ](#)

Satellite imagery shows widespread smoke over the state this afternoon.





Source: [NWS](#)

Satellite analysis from this afternoon continues to show significant smoke over the state.



Source: [NOAA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	Flathead Valley Libby
	<a href="#">Unhealthy</a>	St. Mary Seeley Lake Frenchtown Missoula Hamilton Great Falls Helena Butte Bozeman
	<a href="#">Unhealthy for Sensitive Groups</a>	Lewistown Billings West Yellowstone
	<a href="#">Moderate</a>	

Good

Malta  
Sidney  
Birney  
Broadus

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1600Z August 24 2015

#### SMOKE

Western/Central US and Western Canada:

An enormous amount of light to heavy density smoke is seen heading eastward from the wildfires that continue to burn in California. The light density smoke is seen moving from the Pacific Northwest and through Northern Great Basin, all of Rockies. Western portions of the Northern Plains, Central and Southern Plains, majority of the Middle Mississippi Valley and Western Mississippi Valley. The moderate density smoke extends from northern California through Oregon, Washington, southern British Columbia, Idaho, Montana, Wyoming, Colorado, western Nebraska, Kansas, southern Missouri, and northern Arkansas. The heavier portions of the smoke are seen in northern California heading north into Oregon, central California heading east into Nevada, and in central and northern Idaho spreading out into Montana.

Smoke from the Rough fire in the central Sierra Nevada of California was spreading northeast into Nevada and merging with the smoke from the fires further north. The areas of moderately dense and dense smoke were mainly over the Sierra and east into west central Nevada.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H241625.html>

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AUGUST 25, 2015

**PM2.5 Location(s):** Butte, Flathead, Frenchtown, Hamilton, Helena, Lewistown, Libby, Malta, Missoula, Ncore

**PM10 Location(s):** Kalispell, Whitefish, Columbia Falls, Libby, Missoula

**Synopsis:** Satellite imagery once again shows a large amount of smoke over almost all of Montana. This smoke is being trapped under a ridge of high pressure that has been over the area since Sunday. Westerly winds aloft continue to carry smoke into the region from the numerous fires burning in western Montana, Idaho, and eastern Washington.

#### Documentation:

*Wildfire Smoke Update for Tuesday, August 25, 2015 9:52 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=970>

#### Today's Report and Forecast

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Broadwater, Carbon, Cascade, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Lincoln, Meagher, Park, Pondera, Powell, Madison, Mineral, Missoula, Musselshell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Wheatland, and Yellowstone.

Air quality in Libby is currently HAZARDOUS.



Air quality in Flathead Valley, St. Mary, Frenchtown, Missoula, and Hamilton is currently [VERY UNHEALTHY](#).

Air quality in Seeley Lake, Butte, Helena, and Great Falls is currently [UNHEALTHY](#).

Air quality in Bozeman, Lewistown, and Billings is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [HAZARDOUS](#), state and local health officials recommend that everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should remain indoors.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Air quality impacts continue this morning across western and central Montana as smoke continues to fill the skies across the region. Far western Montana continues to see the worst impacts. Around 5pm last night, concentrations in Libby, MT rose rapidly, leading to [HAZARDOUS](#) 24-hour cumulative exposure levels. Concentrations have decreased a bit this morning but hourly levels remain [UNHEALTHY](#). Elsewhere, 24-hour cumulative exposure levels are [VERY UNHEALTHY](#) in Flathead Valley, St. Mary, Frenchtown, Missoula, and Hamilton, [UNHEALTHY](#) in Seeley Lake, Helena, Great Falls, and Butte, [UNHEALTHY FOR SENSITIVE GROUPS](#) in Bozeman, Lewistown, Billings, and [MODERATE](#) in Birney. Skies are hazy and concentrations are starting to creep up in parts of eastern Montana, although air quality remains [GOOD](#) in Malta, Sidney, and Broadus.

Satellite imagery once again shows a large amount of smoke over almost all of Montana this morning. This smoke is being trapped under a ridge of high pressure that has been over the area since Sunday. Westerly winds aloft continue to carry smoke into the region from the numerous fires burning in western Montana, Idaho, and eastern Washington. This ridge is expected to slowly move east through the week, increasing the southwesterly flow aloft over western Montana. Some isolated showers and thunderstorms are possible on Wednesday and Thursday afternoon, which may bring about some temporary localized improvement. As the southwest flow strengthens it could redirect some of the dense smoke from the large Washington fires into Canada. However, smoke from Idaho and here in Montana is likely to continue causing impacts in Montana. The potential for a cold front to move through over the weekend remains the best chance to see widespread improvement to the smoky conditions. There is still a lot of uncertainty regarding when the front will pass through, how much precipitation will be associated with it, and how it will impact fire activity across the region.

Expect air quality impacts ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [HAZARDOUS](#) across western and central Montana to continue through most of this week. Eastern Montana is likely to see smoke impacts ranging from [MODERATE](#) to [UNHEALTHY FOR SENSITIVE GROUPS](#) during this time.

### Today's Summary

Air quality impacts reaching [HAZARDOUS](#) levels are being reported in Libby and [UNHEALTHY](#) to [VERY UNHEALTHY](#) impacts are being felt across western Montana. Conditions are better in central and eastern Montana, but smoky skies persist across the state. Conditions are expected to persist for much of this week.

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Broadwater, Carbon, Cascade, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Lincoln, Meagher, Park, Pondera, Powell, Madison, Mineral, Missoula, Musselshell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Wheatland, and Yellowstone.

Air quality in Libby is currently [HAZARDOUS](#).

Air quality in Flathead Valley, St. Mary, Frenchtown, Missoula, and Hamilton is currently [VERY UNHEALTHY](#).

Air quality in Seeley Lake, Butte, Helena, and Great Falls is currently [UNHEALTHY](#).

Air quality in Bozeman, Lewistown, and Billings is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [HAZARDOUS](#), state and local health officials recommend that everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should remain indoors.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

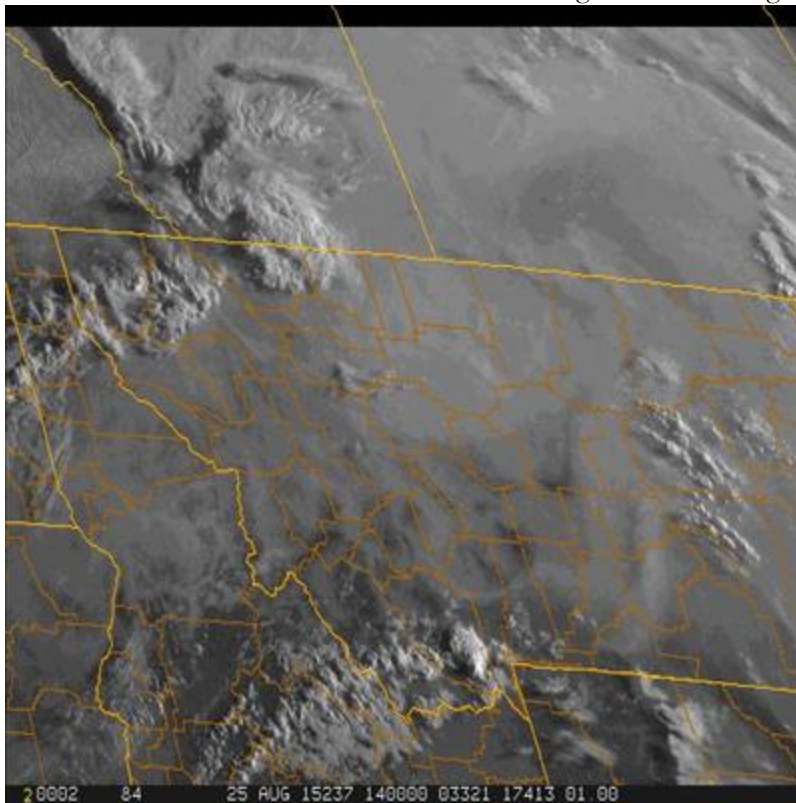
When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

The Bitterroot Valley, along with the rest of Montana, remains under a significant amount of smoke.



Source: [USFS](#)

Smoke is visible across all of Montana this morning on satellite imagery.



Source: [NWS](#)



Yesterday's afternoon satellite imagery shows just how widespread the smoke is across the Pacific Northwest and Northern Rockies.



Source: [NASA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	Libby
	<a href="#">Very Unhealthy</a>	Flathead Valley St. Mary Frenchtown Missoula Hamilton
	<a href="#">Unhealthy</a>	Seeley Lake Butte Helena Great Falls
	<a href="#">Unhealthy for Sensitive Groups</a>	Bozeman Lewistown Billings
	<a href="#">Moderate</a>	Birney



Good

Malta  
Sidney  
Broadus

*Wildfire Smoke Update for Tuesday, August 25, 2015 4:03 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=971>

#### Today's Report and Forecast

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Blaine, Broadwater, Carbon, Cascade, Choteau, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Wheatland, and Yellowstone.

The air quality alert has been expanded to include new areas of northern and central Montana due to decreased visibility and increasing particulate concentrations.

Air quality in Libby is currently HAZARDOUS,

Air quality in Flathead Valley, Frenchtown, Missoula, Seeley Lake, and Hamilton is currently VERY UNHEALTHY,

Air quality in St. Mary, Butte, Helena, Great Falls, and Lewistown is currently UNHEALTHY,

Air quality in Bozeman and Billings is currently UNHEALTHY FOR SENSITIVE GROUPS.

When air quality is VERY UNHEALTHY, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is UNHEALTHY, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is UNHEALTHY FOR SENSITIVE GROUPS, state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Widespread smoke continues to affect much of western and central Montana. Smoke has been slowly making its way from central to eastern Montana this afternoon, as Malta and Birney now have MODERATE 24-hour cumulative air quality. The 24-hour cumulative exposure in Libby has remained in the HAZARDOUS category although hourly levels have decreased throughout the day. Meanwhile, 24-hour cumulative exposure in Flathead Valley, Frenchtown, Missoula, Seeley Lake, and Hamilton has remained in the VERY UNHEALTHY category. St. Mary, Great Falls, Helena, Lewistown, and Butte's 24-hour concentrations have stayed in the UNHEALTHY range, and Bozeman and Billings are UNHEALTHY FOR SENSITIVE GROUPS. One positive note, hourly concentrations in Flathead Valley have decreased to the MODERATE category for the first time since yesterday morning.

The situation is not expected to immediately change, as the high pressure system persists across the state, making it hard for any smoke to clear out. The forecasts show the transport winds aloft to continue to point

from the west to southwest, directly downwind of the active fire behavior in Washington, Idaho, and western Montana. Some isolated showers and thunderstorms are possible on Wednesday and Thursday afternoon, which may bring about some temporary localized improvement, and a cold front may move through over the weekend which remains the best chance for air quality improvement.

Expect air quality impacts ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [HAZARDOUS](#) across western and central Montana to continue through most of this week. Eastern Montana is likely to see smoke impacts ranging from [MODERATE](#) to [UNHEALTHY](#) during this time, and continue through the week.

Note: A temporary monitor has been set up in Browning this afternoon, and reportable concentrations will be seen shortly.

#### **Today's Summary**

Air quality impacts reaching [HAZARDOUS](#) levels possible in far western Montana this afternoon and [UNHEALTHY](#) to [VERY UNHEALTHY](#) impacts are being felt across western Montana. Conditions are better in central and eastern Montana, but smoky skies persist across the state. Conditions are expected to persist for much of this week.

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Blaine, Broadwater, Carbon, Cascade, Choteau, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Wheatland, and Yellowstone.

The air quality alert has been expanded to include new areas of northern and central Montana due to decreased visibility and increasing particulate concentrations.

Air quality in Libby is currently [HAZARDOUS](#),

Air quality in Flathead Valley, Frenchtown, Missoula, Seeley Lake, and Hamilton is currently [VERY UNHEALTHY](#),

Air quality in St. Mary, Butte, Helena, Great Falls, and Lewistown is currently [UNHEALTHY](#),

Air quality in Bozeman and Billings is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

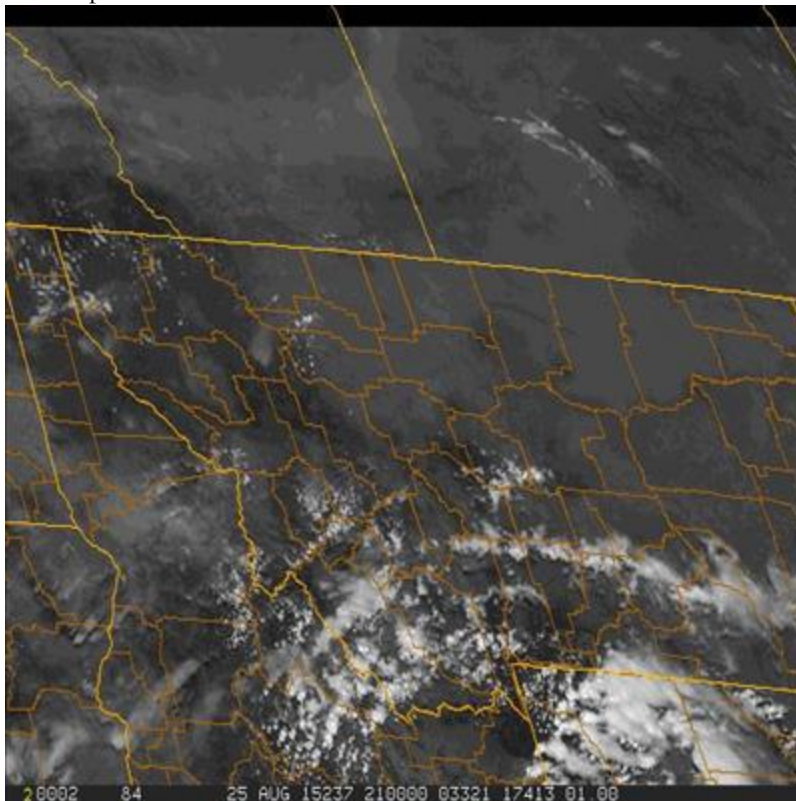
When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Hazy skies persist in Glacier National Park this afternoon.



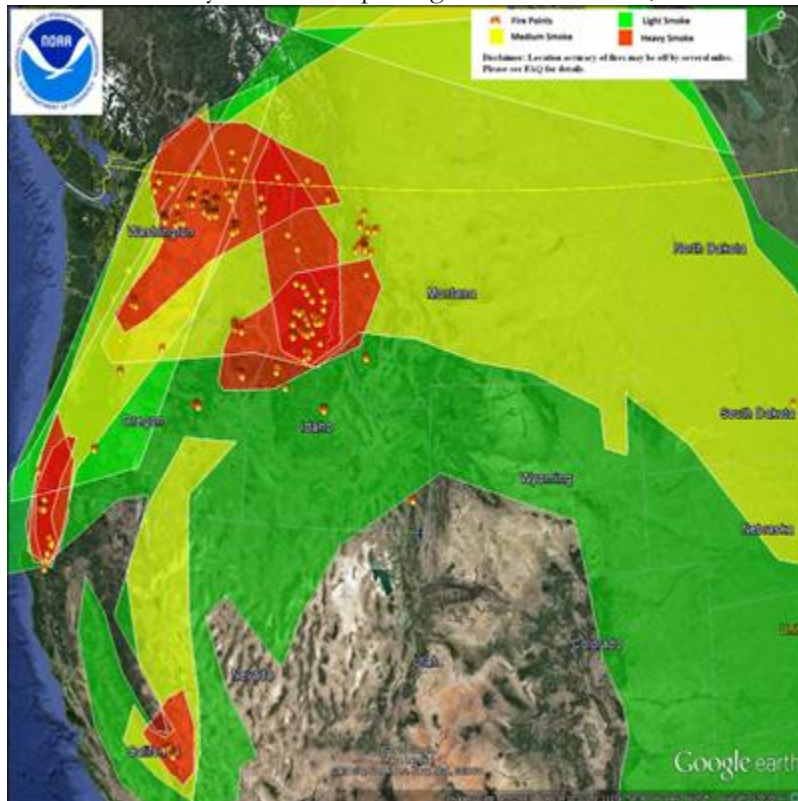
Source: [NWS](#)

Smoke plumes are visible across much of Montana this afternoon.



Source: [NWS](#)

Moderate to heavy smoke is impacting much of the state, as indicated by today's satellite



Source: [NOAA](https://www.noaa.gov/)

There are still many active fires, particularly in Washington, Idaho, and western Montana.



Source: [USFS](https://www.usfs.gov/)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	Libby
	<a href="#">Very Unhealthy</a>	Flathead Valley Frenchtown Missoula Seeley Lake Hamilton
	<a href="#">Unhealthy</a>	St. Mary Great Falls Helena Butte Lewistown
	<a href="#">Unhealthy for Sensitive Groups</a>	Bozeman Billings
	<a href="#">Moderate</a>	Malta Birney



**NOAA Text Description:**

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1630Z August 25 2015

**SMOKE**

Western/Central US and Western/Central Canada:

Large concentrations of light to heavy density smoke remains over a majority of the United States. The light density smoke plume is coming from the fires in Pacific Northwest and heading into Northern Great Basin, all of Rockies, Southern British Columbia, Southern Alberta, most of Saskatchewan, western Manitoba, all of Plains and majority of the Mississippi Valley. The moderate density smoke coming from central California is moving north into western Nevada and into southern Oregon. The fires in northern California are still producing a large amount of moderate density smoke heading north into southern British Columbia, most of Saskatchewan, southeast Manitoba, northwest Oregon, most of Washington, northern Idaho eastward into to most of Montana, northeast Wyoming, most of North & South Dakota, eastern portions of Nebraska and western Iowa. The heavier density smoke is is mainly seen around the fires coming from northern and central California. The Heavy smoke originating in central California are entering Nevada and the ones coming from the Pacific Northwest are heading north into southwestern & northeastern Oregon, Northern Idaho, central & northern Washington into southern British Columbia and as far east as western Montana.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H251705.html>

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AUGUST 26, 2015

**PM2.5 Location(s):** Flathead, Frenchtown, Hamilton, Helena, Lewistown, Libby, Malta, Missoula, Ncore

**PM10 Location(s):** Thompson Falls, Kalispell, Columbia Falls, Missoula

**Synopsis:** Satellite imagery once again shows a large amount of smoke over almost all of Montana. This smoke is being trapped under a ridge of high pressure that has been over the area since Sunday. Westerly winds aloft continue to carry smoke into the region from the numerous fires burning in western Montana, Idaho, and eastern Washington.

**Documentation:**

*Wildfire Smoke Update for Wednesday, August 26, 2015 9:31 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=972>

**Today's Report and Forecast**

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Blaine, Broadwater, Carbon, Cascade, Choteau, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Wheatland, and Yellowstone.

Air quality in Hamilton is currently **VERY UNHEALTHY**,

Air quality in Libby, Flathead Valley, St. Mary, Seeley Lake, Missoula, Frenchtown, Helena, Great Falls, Butte, Lewistown, Malta, and Browning, is currently **UNHEALTHY**,

Air quality in Birney, Broadus, and Billings is currently **UNHEALTHY FOR SENSITIVE GROUPS**.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

We are seeing fairly uniform air quality readings around the state this morning as smoke becomes more evenly dispersed under the ridge of high pressure. This is an improvement for northwest Montana, where concentrations have decreased significantly since yesterday morning. Eastern Montana is starting to see concentrations rise, especially across northern Montana. Most areas are seeing hourly concentrations hover in the [UNHEALTHY FOR SENSITIVE GROUPS](#) category, which results in 24-hour cumulative exposure in the [UNHEALTHY](#) category for Libby, Flathead Valley, St. Mary, Seeley Lake, Missoula, Frenchtown, Helena, Great Falls, Butte, Lewistown, Malta, and the newly setup Browning monitor. Unfortunately, the Bitterroot Valley is still experiencing [UNHEALTHY](#) hourly air quality with 24-hour cumulative exposure in the [VERY UNHEALTHY](#) category. There is some good news across southern Montana where hourly concentrations have reached [GOOD](#) to [MODERATE](#) levels in Bozeman, Billings, and Broadus and 24-hour cumulative exposure is in the [UNHEALTHY FOR SENSITIVE GROUPS](#) category.

Satellite imagery this morning indicates smoke across much of Montana. There is a break in the dense smoke across southern Montana as winds aloft are keeping smoke from Idaho and Washington further north. This accounts for the improvement we have been seeing in Bozeman and Billings over the past 12 hours. However, we are starting to see smoke from the northern California fires move into northwest Montana, which could continue to impact the region as we approach the weekend. There is a chance for isolated afternoon showers and thunderstorms today and tomorrow. These storms may help bring brief localized improvement in some areas, but are not expected to impact the widespread smoke that is trapped over the region. This weekend will be interesting. A low pressure trough will be moving down towards the Pacific Northwest, bringing western Montana under southwesterly flow aloft. More importantly, precipitation and cool temperatures are expected over the large fires burning in Washington and Idaho on Saturday and possibly reaching parts of western Montana. If fire activity decreases on these fires, Montana could see a substantial improvement in air quality. The southwest flow would further help redirect smoke from these fires away from the state, although we may see impacts continue from northern California. Fortunately, it looks like the low pressure trough will continue to impact the area next week, hopefully mitigating to the seemingly endless flow of smoke into the region.

The slightly unsettled weather on Thursday may briefly increase fire behavior and consequently smoke impacts, especially on the large fires to our west. This weekend, instead of seeing rapid improvement like we did last weekend, it is more likely we will see gradual improvement across the area as fires slow down and winds redirect smoke away from the area. In the meantime, expect air quality ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [VERY UNHEALTHY](#) across the state.

### Today's Summary

Air quality impacts are expected to last through the week as smoke remains trapped under the ridge of high pressure. The weekend may bring gradual improvement due to a cool, wet weather pattern over the fires. It looks like we may finally get some long term relief next week.

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Blaine, Broadwater, Carbon, Cascade, Choteau, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Wheatland, and Yellowstone.

Air quality in Hamilton is currently [VERY UNHEALTHY](#),

Air quality in Libby, Flathead Valley, St. Mary, Seeley Lake, Missoula, Frenchtown, Helena, Great Falls, Butte, Lewistown, Malta, and Browning, is currently [UNHEALTHY](#),

Air quality in Birney, Broadus, and Billings is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

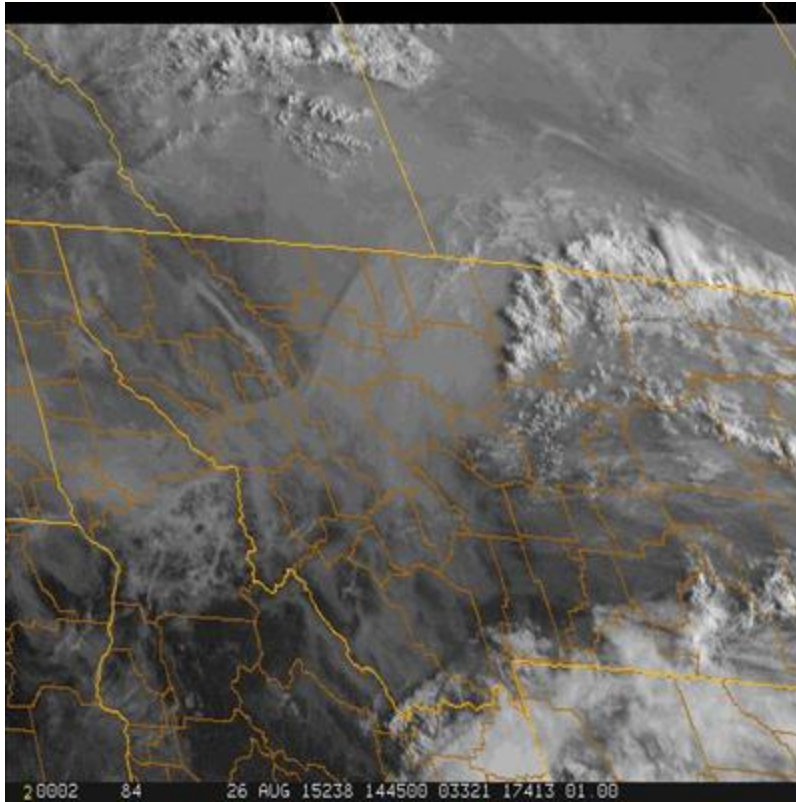
The hazy skies and decreased visibility is a familiar view across much of Montana. Below, the view from Gates of the Mountain is obscured by smoke.



Source: [USFS](#)



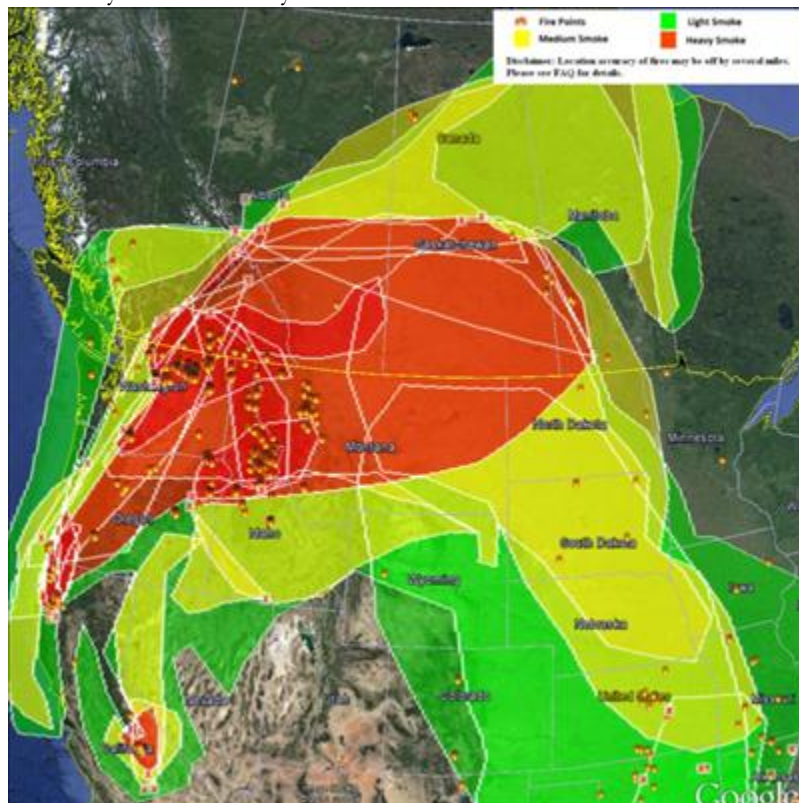
Smoke continues to impact northern Montana. One bit of good news to report - the smoke is less dense across the southern tier of the state.



Source: [NWS](#)

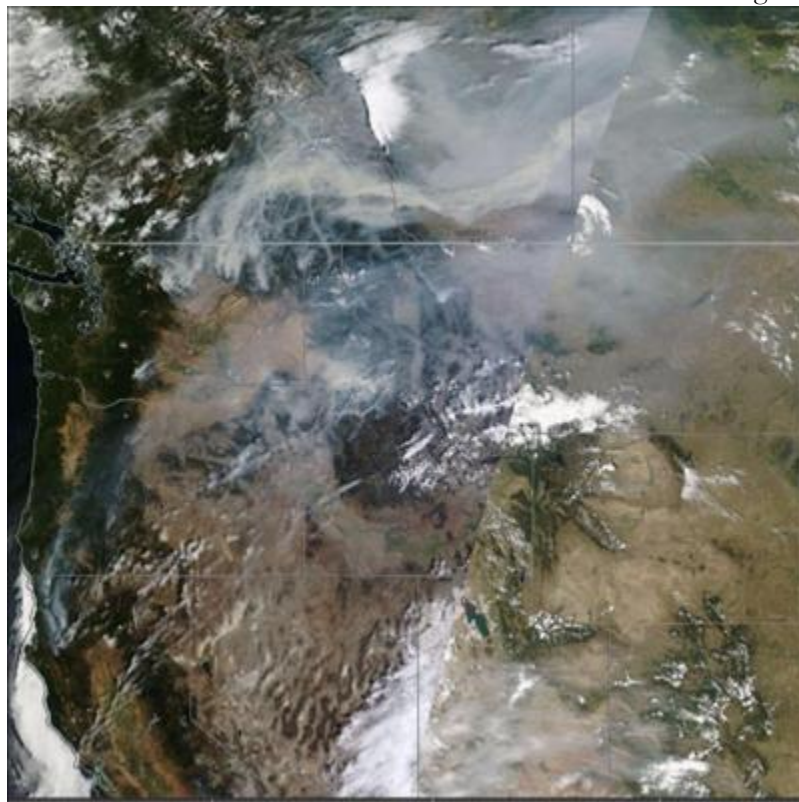


Yesterday's satellite analysis shows dense smoke over much of the state.



Source: [NOAA](#)

Yesterday's afternoon satellite shows smoke from the Washington fires moving up into Canada. We are still dealing with a large amount of smoke trapped under the ridge that will likely persist through the early part of the weekend. Some smoke from northern California is also starting to move into the region.



Source: [NASA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	Hamilton
	<a href="#">Unhealthy</a>	Libby Flathead Valley St. Mary Seeley Lake Missoula Frenchtown Helena Great Falls Butte Lewistown Malta Browning
	<a href="#">Unhealthy for Sensitive Groups</a>	Birney

		Broadus Billings
	<a href="#">Moderate</a>	Bozeman
	<a href="#">Good</a>	

***Wildfire Smoke Update for Wednesday, August 26, 2015 4:38 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=973>

**Today's Report and Forecast**

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Blaine, Broadwater, Carbon, Cascade, Choteau, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Wheatland, and Yellowstone.

Air quality in Flathead Valley and Hamilton is currently [VERY UNHEALTHY](#),

Air quality in Libby, St. Mary, Browning, Seeley Lake, Frenchtown, Missoula, Helena, Great Falls, Lewistown and Malta is currently [UNHEALTHY](#),

Air quality in Butte, Billings, Birney, and Broadus is currently [UNHEALTHY FOR SENSITIVE GROUPS](#),

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Concentrations have stayed relatively steady this afternoon across the region. The exception to this trend is Flathead Valley, where hourly concentrations increased rapidly at 12pm, reaching the [VERY UNHEALTHY](#) category before decreasing the past hour back to [UNHEALTHY](#) levels. Cumulative exposure is currently [VERY UNHEALTHY](#) in Flathead Valley and Hamilton, [UNHEALTHY](#) in Libby, St. Mary, Browning, Seeley Lake, Frenchtown, Missoula, Helena, Great Falls, Lewistown and Malta, [UNHEALTHY FOR SENSITIVE GROUPS](#) in Butte, Billings, Broadus, and Birney, and [GOOD](#) in Bozeman and Sidney.

Satellite imagery this afternoon indicates a large amount of smoke from the Bear Creek and Trail Creek fires, moving down the Hungry Horse reservoir and into Columbia Falls and the Flathead Valley. There is also dense smoke originating from fires in Idaho, Western Montana and Northern California, causing impacts

across the northern portion of the state. Winds are increasing along the southern tier of the state, creating better air quality from Butte to Broadus. The high pressure will continue to hold over the region through Friday, causing smoke impacts to linger. Isolated showers and thunderstorms are possible each afternoon, although these are not expected to improve smoke concentrations significantly across the region. A low pressure trough will be moving south towards the Pacific Northwest, bringing western Montana under southwesterly flow aloft this weekend. More importantly, precipitation and cool temperatures are expected over the large fires burning in Washington and Idaho on Saturday and possibly reaching parts of northwestern Montana. If fire activity decreases on these fires, Montana could see a substantial improvement in air quality. The southwest flow would further help redirect smoke from these fires away from the state, although we may see impacts continue from northern California. The weather pattern next week still has the potential to bring cooler, wetter conditions to the region, hopefully reducing smoke impacts compared to this week.

The slightly unsettled weather each afternoon may increase fire behavior and consequently smoke impacts, as was the case in Flathead Valley this afternoon. This weekend, instead of seeing rapid improvement like we did last weekend, it is more likely we will see gradual improvement across the area as fires slow down and winds redirect smoke away from the area. In the meantime, expect air quality ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [HAZARDOUS](#) across the state.

### **Today's Summary**

Air quality impacts are expected to last through the week as smoke remains trapped under the ridge of high pressure. The weekend may bring gradual improvement due to a cool, wet weather pattern over the fires. There is a chance we may finally get some long term relief next week.

**An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Blaine, Broadwater, Carbon, Cascade, Choteau, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Wheatland, and Yellowstone.**

Air quality in Flathead Valley and Hamilton is currently [VERY UNHEALTHY](#),

Air quality in Libby, St. Mary, Browning, Seeley Lake, Frenchtown, Missoula, Helena, Great Falls, Lewistown and Malta is currently [UNHEALTHY](#),

Air quality in Butte, Billings, Birney, and Broadus is currently [UNHEALTHY FOR SENSITIVE GROUPS](#),

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

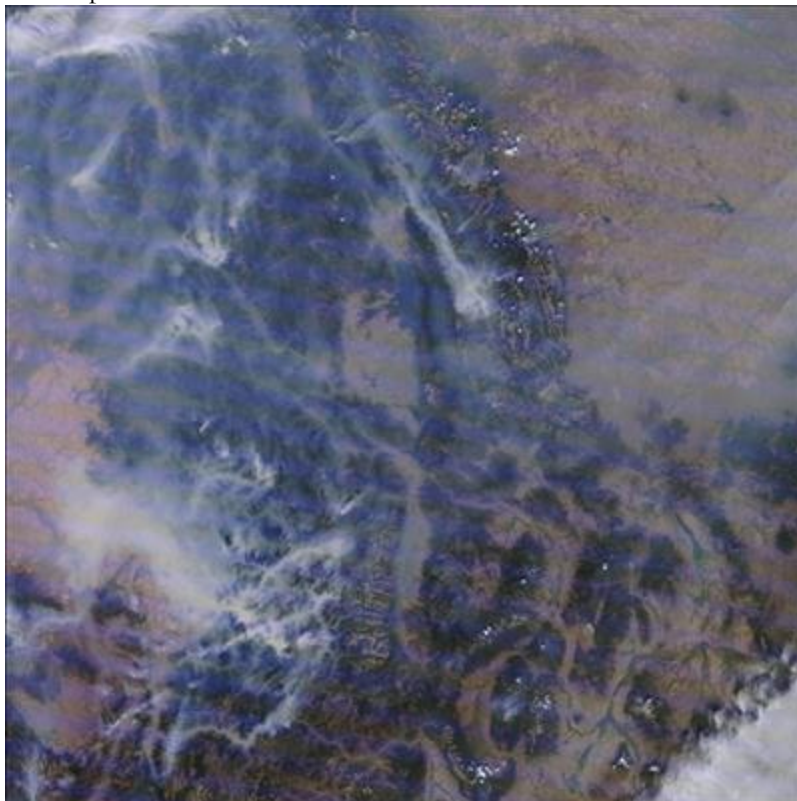
When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Hazy skies persist in Glacier National Park this afternoon.



Source: [NPS](#)

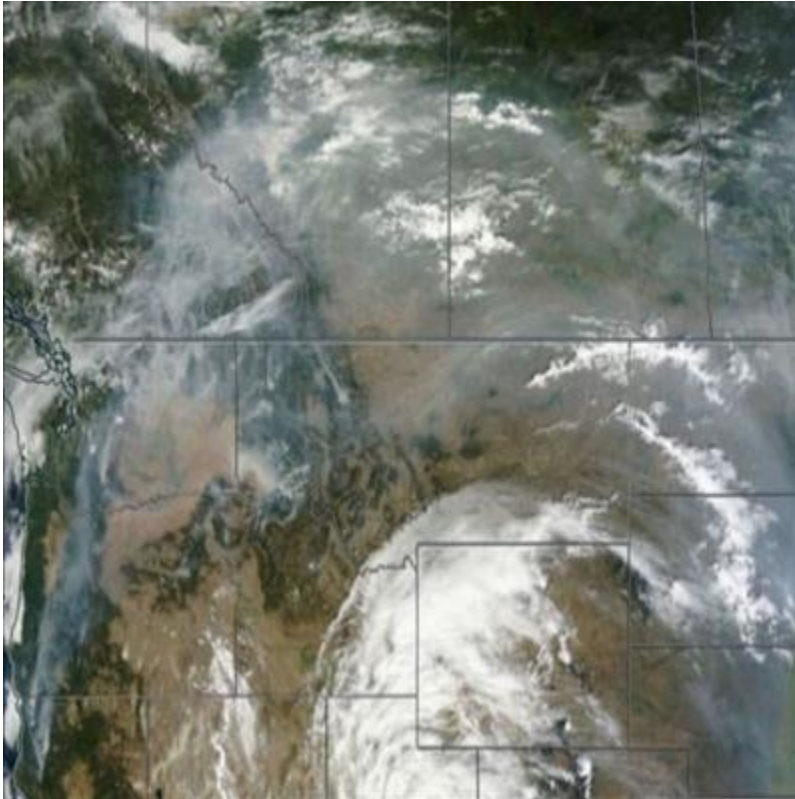
Smoke plumes are visible across much of Montana this afternoon.



Source: [USFS](#)

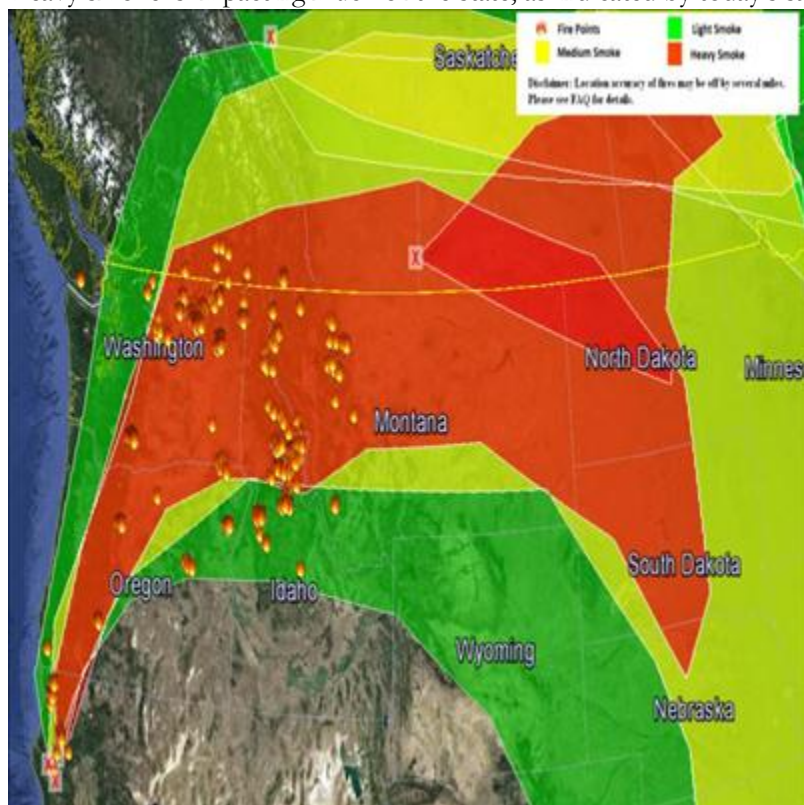


Smoke from Northern California, Idaho and Montana can be seen impacting the region this afternoon.



Source: [NASA](#)

Heavy smoke is impacting much of the state, as indicated by today's satellite analysis.



Source: [NOAA](https://www.noaa.gov)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
<span style="background-color: #800000; color: white; padding: 2px;">Hazardous</span>		
<span style="background-color: #800080; color: white; padding: 2px;">Very Unhealthy</span>		Hamilton Flathead Valley
<span style="background-color: #FF0000; color: white; padding: 2px;">Unhealthy</span>		Libby St. Mary Browning Seeley Lake Frenchtown Missoula Helena Great Falls Lewistown Malta
<span style="background-color: #FF8C00; color: white; padding: 2px;">Unhealthy for Sensitive Groups</span>		Butte Billings Birney Broadus
<span style="background-color: #FFFF00; color: white; padding: 2px;">Moderate</span>		

**NOAA Text Description:**

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1830Z August 26, 2015  
SMOKE

**Western/Central US:**

Large concentrations of light to heavy density smoke is visible across the country originating from the Pacific NW. The heaviest smoke is visible moving north from California through Oregon, Washington, northern Idaho, Montana and North and South Dakota. The moderate density smoke is visible affecting northern California, through Oregon, Idaho, North and South Dakota, Nebraska, Iowa, Kansas, western Missouri as it continues SE into northeast Oklahoma and Arkansas. The Light density smoke is coming from the Pacific NW and is visible throughout Northern Basin, Northern Rockies, the Plains and all of the Mississippi Valley.

**Western/Central Canada:Eastern Canada:**

A large area of light to moderate density smoke is seen in western Canada throughout southern British Columbia, most of Alberta, Saskatchewan, Manitoba, western Ontario and central Hudson bay. The moderate density smoke is visible in southern Alberta, Saskatchewan, Manitoba and western Ontario. Another patch of light density smoke is visible in the east coast of Canada making its way down south into the eastern portions of the US. The light density smoke encompassed all of Newfoundland and Labrador, northeast Quebec and as far south as Prince Edward Island.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H261906.html>

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AUGUST 27, 2015

**PM2.5 Location(s):** Flathead, Frenchtown, Hamilton, Helena, Lewistown, Libby, Missoula, Ncore

**PM10 Location(s):** Thompson Falls, Kalispell, Whitefish, Columbia Falls, Libby, Missoula

**Synopsis:** Satellite imagery once again shows a large amount of smoke over almost all of Montana. This smoke is being trapped under a ridge of high pressure that has been over the area since Sunday. Westerly winds aloft continue to carry smoke into the region from the numerous fires burning in western Montana, Idaho, and eastern Washington.

**Documentation:**

**Wildfire Smoke Update for Thursday, August 27, 2015 11:21 AM**

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=974>

**Today's Report and Forecast**

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Blaine, Broadwater, Cascade, Choteau, Deer Lodge, Glacier, Granite, Hill, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Petroleum, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Teton, and Toole.

Air Quality Alerts have been lifted in the following counties due to reduced particulate concentrations and increased visibility: Carbon, Gallatin, Golden Valley, Musselshell, Park,

Stillwater, Sweet Grass, Wheatland, and Yellowstone.

Air quality in Libby, Flathead Valley, and Hamilton is currently VERY UNHEALTHY.

Air quality in St. Mary, Browning, Frenchtown, Missoula, Seeley Lake, Helena, Great Falls, Lewistown, and Malta is currently UNHEALTHY.

Air quality in Butte, Sidney, and Broadus is currently UNHEALTHY FOR SENSITIVE GROUPS.

When air quality is VERY UNHEALTHY, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is UNHEALTHY, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is UNHEALTHY FOR SENSITIVE GROUPS, state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Hazy skies and ground level smoke persist in much of western and north-central Montana, with relatively stable PM2.5 concentrations showing on many of the monitors since yesterday afternoon. Libby has been showing climbing levels since 8PM yesterday, probably effects from the fires in close proximity. Cumulative exposures remain VERY UNHEALTHY in Libby, Flathead Valley, and Hamilton, and UNHEALTHY in St. Mary, Browning, Frenchtown, Missoula, Seeley Lake, Helena, Great Falls, Malta and Lewistown UNHEALTHY FOR SENSITIVE GROUPS in Butte, Broadus, and Sidney. While hazy skies are persisting in Bozeman, Billings, and Birney, concentrations have been dropping and the latest 1-hour concentrations have been in the GOOD category. Because concentrations have remained below air quality alert thresholds in these cities for the past day, the alert has been lifted for these counties.

Due to the widespread smoke this week, there hasn't been much discussion on the individual fires burning in the region. The Bear Creek fire in the Flathead National Forest, which went on a dramatic 17,000 acre run in 4 hours late last week, is now 28,700 acres. This fire, along with the Trail Creek fire nearby, which is currently 11,000 acres, has been sending smoke into the Flathead Valley on and off this week. The Thompson Divide Complex in and near Glacier National Park is now 18,481 acres. The Northeast Kootenai Complex is 4,010 acres, The Clark Fork Complex, burning near Noxon, MT along the ID/MT border is 12,405 acres. A little further south the Grizzly Complex has burned 12,137 acres. Numerous large fires are also burning in central Idaho, including the 30,974 acre Motorway Complex, the 8,500 acre Wilderness Complex, and the 1,600 acre Boulder fire. All of these fires are displaying active fire behavior and causing smoke impacts in Montana. Outside of the northern Rockies, we are starting to see smoke from Northern California impact the region as southwest winds strengthen over the area. There are currently 20 large, uncontained fires burning in Northern California. In Washington, the 280,267 acre Okanogan fire, the 170,000 acre North Star fire, the 60,205 acre Kettle Complex, and the 43,965 acre Carpenter Rd. fire continue to produce large amounts of smoke. Fortunately, this smoke is expected to move northeast into Canada for the next few days.

Much of the state is still under the high pressure system, but there are some cloud cover and little precipitation under parts of southwestern Montana. This may not impact conditions much, as the low-level air is still relatively dry. A red flag warning is now in place to the east of Glacier National Park through this evening. Increased winds across western Montana today may cause fire activity to increase and/or new fires to break out. Clouds and possible precipitation are possible again Friday afternoon. A low pressure system from the Washington is expected to move towards the state as wind speeds will increase and shift to the

southwest starting Friday night. This should help ventilate smoke in the area, and push smoke from existing fires more north, which should keep air quality relatively good in southeastern Montana.

### Today's Summary

Air quality impacts are expected to last through the week as smoke remains trapped under the ridge of high pressure. The weekend may bring some improvement due to a cooler and wetter weather pattern over the fires. However, increased winds and uncertain precipitation amounts means fire activity may remain high and smoke impacts could continue.

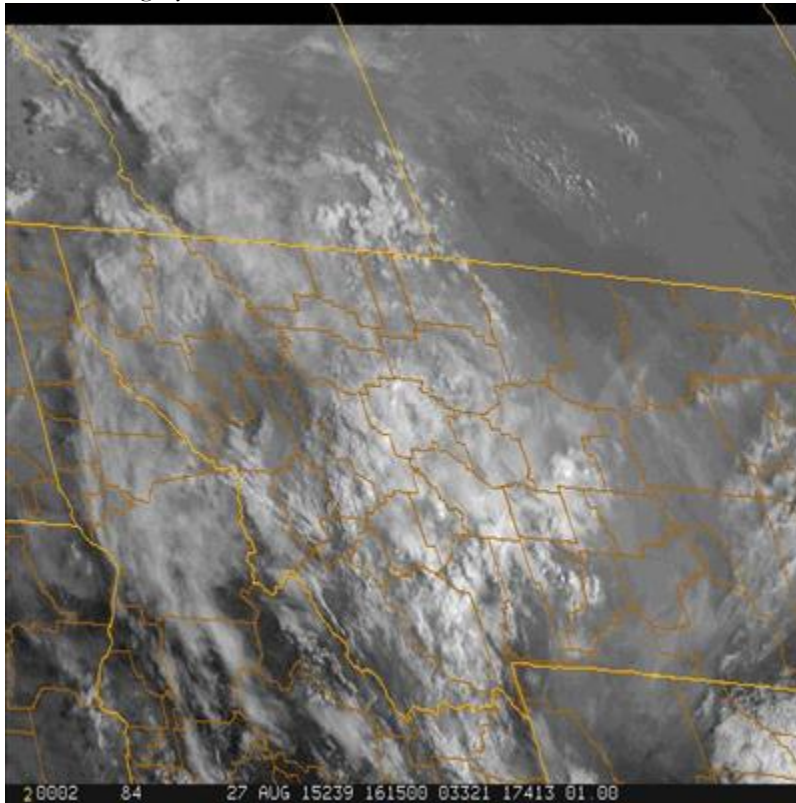
The view from St. Mary is hazy this morning.



Source: [NPS](#)

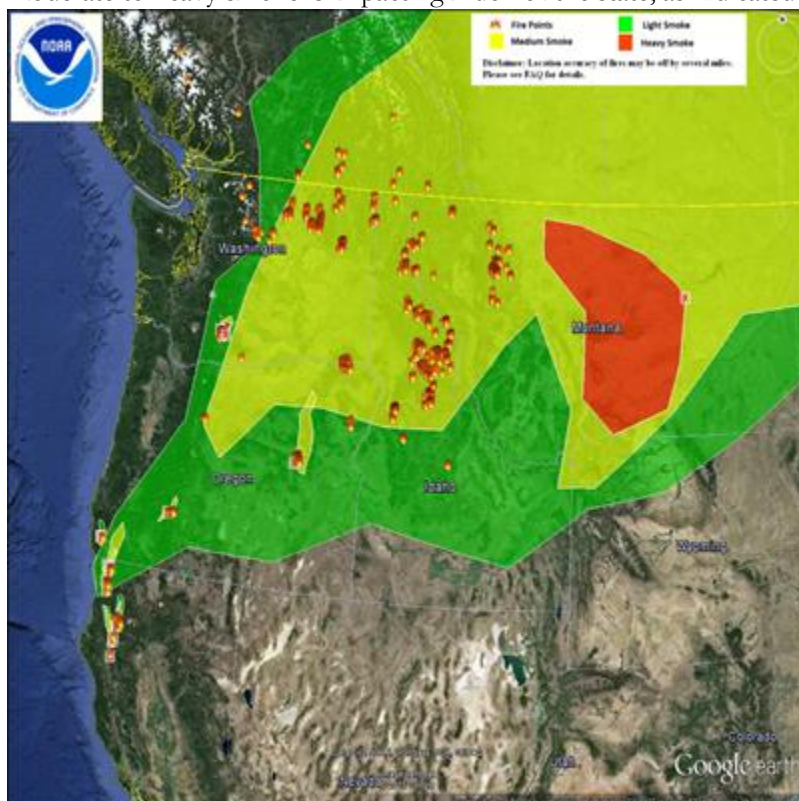


Satellite imagery shows smoke mixed with some clouds over southwest Montana.



Source: [NWS](#)

Moderate to heavy smoke is impacting much of the state, as indicated by today's satellite analysis.



Source: [NOAA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	Libby Flathead Valley Hamilton
	<a href="#">Unhealthy</a>	St. Mary Browning Seeley Lake Missoula Frenchtown Helena Great Falls Lewistown Malta
	<a href="#">Unhealthy for Sensitive Groups</a>	Butte Broadus Sidney

<a href="#">Moderate</a>	Bozeman Billings Birney
<a href="#">Good</a>	

***Wildfire Smoke Update for Thursday, August 27, 2015 5:06 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=975>

**Today's Report and Forecast**

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Blaine, Broadwater, Carbon, Cascade, Choteau, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Wheatland, and Yellowstone.

The air quality alert has been re-issued for southern Montana due to increasing concentrations and significant smoke on satellite imagery.

Air quality in Libby, Flathead Valley, and Hamilton is currently [VERY UNHEALTHY](#).

Air quality in St. Mary, Browning, Frenchtown, Missoula, Seeley Lake, Helena, Great Falls, and Lewistown is currently [UNHEALTHY](#).

Air quality in Butte, Sidney, Broadus, and Malta is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Particulate concentrations overall have been gradually increasing throughout the day today. The low winds and warming afternoon temperatures have not transported smoke far, especially in the western valley locations. The Flathead Valley monitor again saw a sharp increase around 12 pm today, which appears to be due to a steady northeast wind, which likely blew smoke from the fires in the vicinity of Glacier National Park. Cumulative concentrations still keep Flathead Valley, Libby, and Hamilton in the [VERY UNHEALTHY](#) category, while again Frenchtown, Missoula, Seeley Lake, St. Mary, Browning, Helena, Great Falls, and Lewistown remain in the [UNHEALTHY](#) range. Malta has dropped into [UNHEALTHY FOR SENSITIVE GROUPS](#) this afternoon, along with Butte. Cumulative concentrations in Bozeman and Billings are currently [MODERATE](#), with concentrations rising. Although the 1-hour concentrations are [GOOD](#) in eastern and southeastern Montana this afternoon, the skies are visibly hazy, and there is a possibility that smoke will reach the ground level where the concentrations are measured later today.

The state remains under high pressure through today and into tomorrow, so smoke impacts are not expected to lessen any time soon. Transport winds are expected to remain from the west, which will continue to push smoke from fires upwind in Washington, Idaho, and western Montana. Extensive smoke is visible on satellite imagery and webcams this afternoon. Some of this smoke is likely to settle into the valleys this evening and we may see concentrations increase even further over the next few hours. A weak cold front ahead of a low pressure system is expected to push into the state over the weekend, bringing in cooler air and possible precipitation, which will hopefully bring some relief from all this smoke.

With the ridge moving out of the area by next week we are likely to see a more active weather pattern. This will hopefully keep smoke impacts lower as improved ventilation will be better able to clear smoke out of the valleys. Unfortunately, increased winds may also bring an increase to fire activity and smoke impacts are likely to continue. In the meantime, increased fire activity may continue to dump smoke into much of the area. Expect [MODERATE](#) to [VERY UNHEALTHY](#) in most of the state, with the most significant impacts in the northwest and Bitterroot Valley.

### **Today's Summary**

Smoke continues to impact western Montana today, ranging from unhealthy to very unhealthy. Although improvements were seen in eastern and southeastern Montana this morning, satellite imagery and increased concentrations show smoke impacting the area, which prompted the air quality alerts in that area to be put back in place.

**An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Blaine, Broadwater, Carbon, Cascade, Choteau, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Wheatland, and Yellowstone.**

**The air quality alert has been re-issued for southern Montana due to increasing concentrations and significant smoke on satellite imagery.**

**Air quality in Libby, Flathead Valley, and Hamilton is currently [VERY UNHEALTHY](#).**

**Air quality in St. Mary, Browning, Frenchtown, Missoula, Seeley Lake, Helena, Great Falls, and Lewistown is currently [UNHEALTHY](#).**

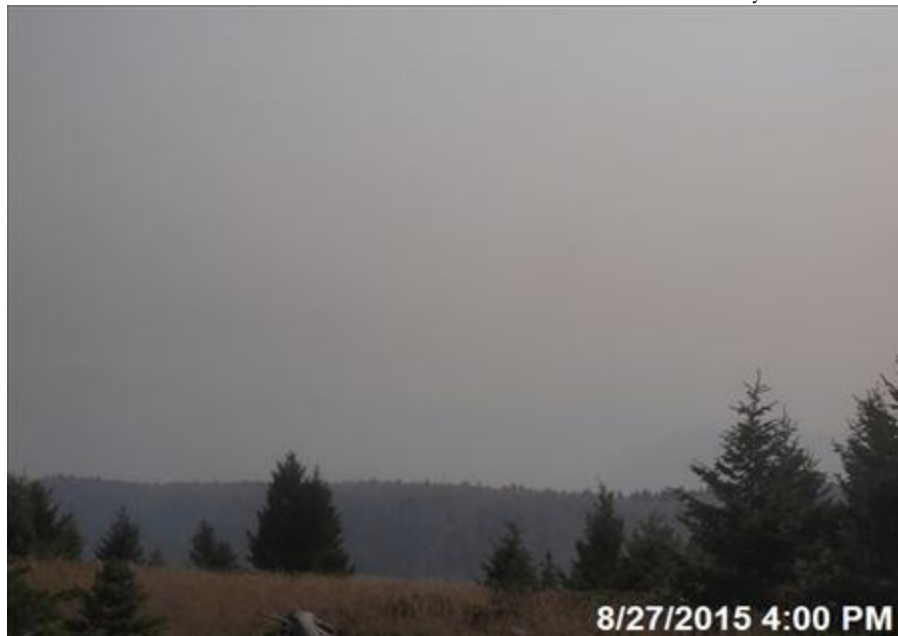
**Air quality in Butte, Sidney, Broadus, and Malta is currently [UNHEALTHY FOR SENSITIVE GROUPS](#)**

**When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.**

**When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

**When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.**

The view from Gates of the Mountains shows the current visibility.



Source: [USFS](#)

Webcams show thick smoke in the Bitterroot Valley this afternoon.

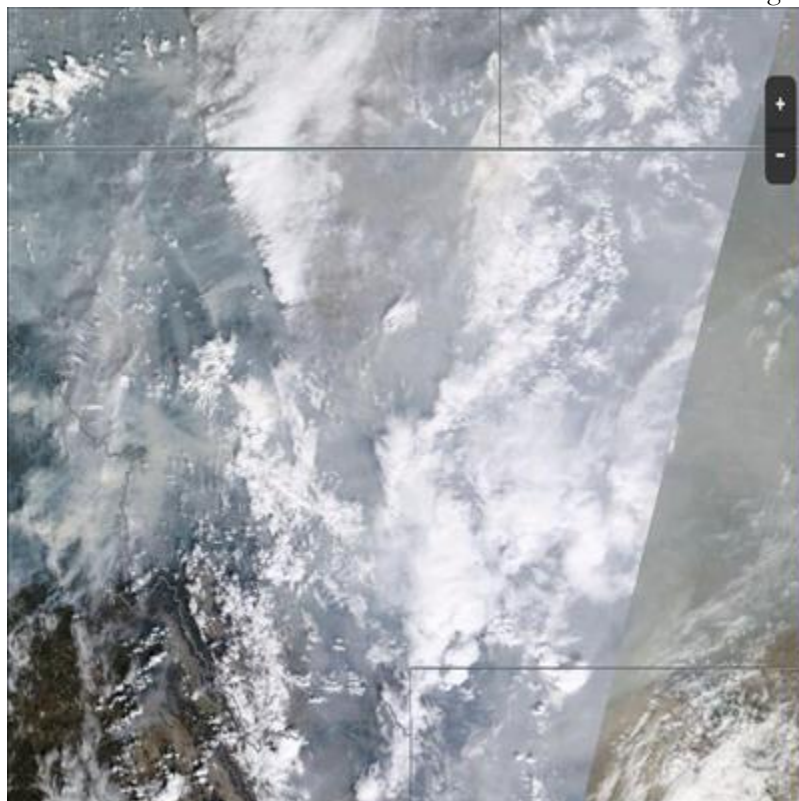


Source: [USFS](#)





A thick blanket of smoke is visible on the latest NASA satellite image.



Source: [NASA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	
	<a href="#">Very Unhealthy</a>	Libby Hamilton Flathead Valley
	<a href="#">Unhealthy</a>	St. Mary Browning Seeley Lake Missoula Frenchtown Helena Great Falls Lewistown
	<a href="#">Unhealthy for Sensitive Groups</a>	Butte Sidney Broadus Malta

<a href="#">Moderate</a>	Bozeman Billings Birney
<a href="#">Good</a>	

### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1800Z August 27, 2015

#### SMOKE

Pacific Northwest/Central US/Southern Canada:

Large wildfires in the Pacific Northwest continue to produce moderately dense to very dense smoke that is primarily observed in northwest California, Oregon, Washington, Idaho, Montana, North Dakota, north Minnesota, Wisconsin, and Illinois as well as throughout the southern Canadian Provinces that border the northwest and north central US States. Moderate density smoke is also observed over southeast Missouri and northeast Arkansas. Thin smoke from these fires extends northeastward to southern Hudson Bay and southward through the entire central US to southern Texas.

Central California/West Central Nevada:

Thin to moderately dense smoke is observed from wildfires burning in the central Sierras of California. An area of remnant thin smoke from these fires had moved northward across western portions of Nevada.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H271806.html>

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AUGUST 28, 2015

**PM2.5 Location(s):** Birney, Broadus, Butte, Flathead, Frenchtown, Helena, Lewistown, Libby, Malta, Missoula, Ncore, Sidney

**PM10 Location(s):** Kalispell, Whitefish, Butte, Columbia Falls, Missoula

**Synopsis:** Satellite imagery once again shows a large amount of smoke over almost all of Montana. This smoke is being trapped under a ridge of high pressure that has been over the area since Sunday. Westerly winds aloft continue to carry smoke into the region from the numerous fires burning in western Montana, Idaho, and eastern Washington.

#### Documentation:

*Wildfire Smoke Update for Friday, August 28, 2015 9:34 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=976>

#### Today's Report and Forecast

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Blaine, Broadwater, Carbon, Cascade, Choteau, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Wheatland, and Yellowstone.

Air quality in Hamilton is currently [HAZARDOUS](#).

Air quality in Libby, Flathead Valley, St. Mary, Browning, Frenchtown, Missoula, Seeley Lake, and Great Falls is currently [VERY UNHEALTHY](#).

Air quality in Helena, Lewistown and Billings is currently [UNHEALTHY](#).

Air quality in Butte, Bozeman, Birney, Broadus, and Malta is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [HAZARDOUS](#), state and local health officials recommend that everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should remain indoors.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

The large amount of smoke that was visible on satellite yesterday afternoon caused a significant increase in hourly concentrations for many areas last night. Hourly concentrations in Hamilton reached [VERY UNHEALTHY](#) levels from about 6pm to 2am. This has pushed the cumulative exposure in Hamilton up to the [HAZARDOUS](#) category. Hourly values were [UNHEALTHY](#) in many other locations, leading to [VERY UNHEALTHY](#) cumulative exposure in Libby, Flathead Valley, St. Mary, Browning, Frenchtown, Missoula, Seeley Lake and Great Falls. Cumulative exposure is currently [UNHEALTHY](#) in Helena, Lewistown, and Billings, [UNHEALTHY FOR SENSITIVE GROUPS](#) in Butte, Bozeman, Birney, Broadus, and Malta, [MODERATE](#) in Sidney, and [GOOD](#) in West Yellowstone.

It looks like most areas will have to wait until Saturday afternoon/evening before we start to see some relief from all this smoke. The ridge of high pressure will remain over the area today and the early part of tomorrow. In addition, some isolated thunderstorms may pop up this afternoon. These storms will not have much precipitation associated with them and consequently will not help clear any smoke from the region. On Saturday afternoon, a cold front is expected to move from west to east, pushing the ridge to the east and ushering in a cooler and more active pattern for next week. A low pressure trough will persist over southwestern Canada for much of the week, leaving Montana under west to southwest winds and frequent disturbances. This pattern will hopefully help mitigate smoke impacts by increasing air flow through the region and allow for more frequently scouring of the smoke. Unfortunately, areas of western Montana, especially the Bitterroot Valley, will likely continue to see smoke impacts due to the proximity to the large fires in Idaho. Elsewhere, expect hazy skies and periods of decreased air quality.

Overall, expect air quality impacts ranging from [UNHEALTHY](#) to [HAZARDOUS](#) in western Montana, and [MODERATE](#) to [UNHEALTHY](#) in central and eastern Montana through tomorrow afternoon. We may see conditions worsen ahead of the cold front tomorrow as increased winds fuel fire activity and create more smoke. After the passage of the front expect conditions to improve compared to this week in most locations.

#### **Today's Summary**

Air quality impacts ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [HAZARDOUS](#) will continue through tomorrow morning. We will start to see improvement tomorrow afternoon/evening when a cold front moves through the area. Cooler, more active weather behind the front will hopefully mitigate impacts compared to this week. However, smoke is likely to continue to impact some areas, especially along

the Idaho/Montana border, for the foreseeable future.

An Air Quality Alert has been issued until further notice in the following counties due to elevated particulate concentrations: Beaverhead, Blaine, Broadwater, Carbon, Cascade, Choteau, Deer Lodge, Gallatin, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Fergus, Flathead, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Wheatland, and Yellowstone.

Air quality in Hamilton is currently [HAZARDOUS](#).

Air quality in Libby, Flathead Valley, St. Mary, Browning, Frenchtown, Missoula, Seeley Lake, and Great Falls is currently [VERY UNHEALTHY](#).

Air quality in Helena, Lewistown and Billings is currently [UNHEALTHY](#).

Air quality in Butte, Bozeman, Birney, Broadus, and Malta is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [HAZARDOUS](#), state and local health officials recommend that everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should remain indoors.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

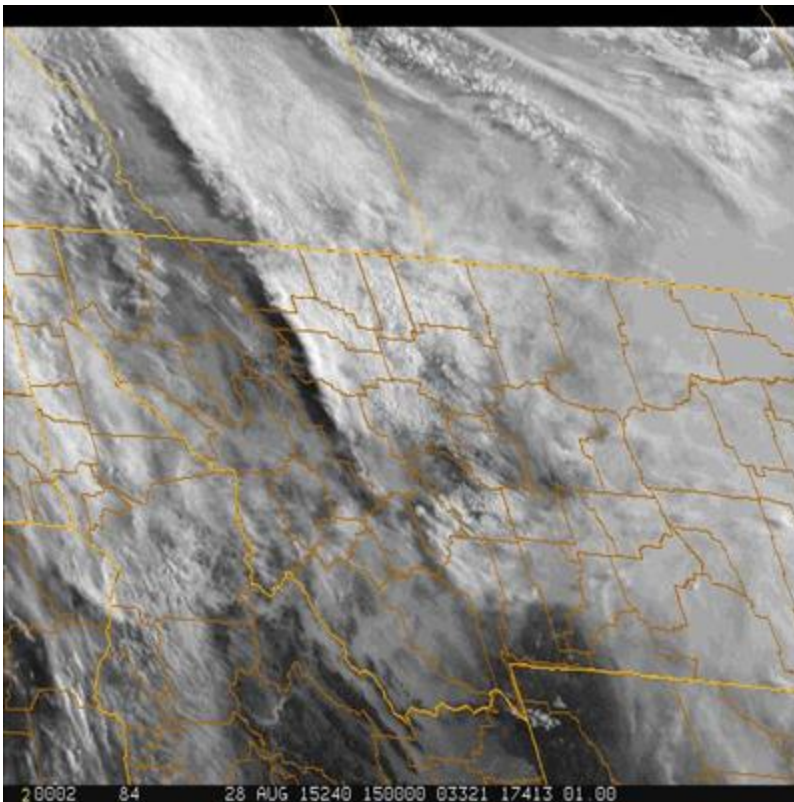


Webcams show smoke in the Bitterroot Valley:



Source: [USFS](#)

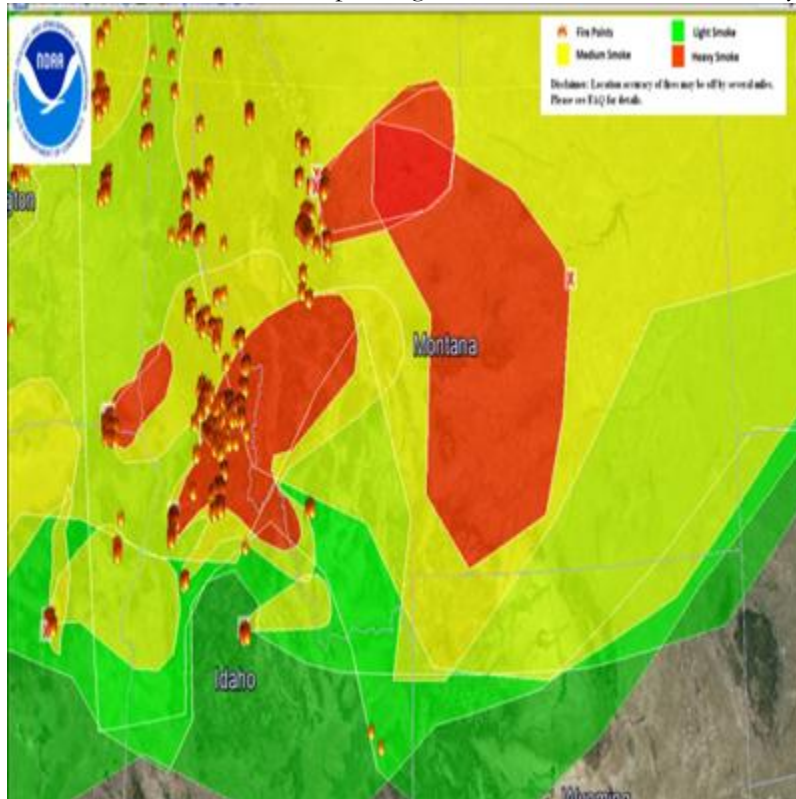
Smoke can be seen throughout Montana, although slightly obscured by clouds in central and eastern Montana:



Source: [NWS](#)



Numerous fires in Idaho are pouring smoke into the Bitterroot Valley this morning:



Source: [HMS](#)

Fire activity continues to increase across the Northern Rockies as of this morning's report:



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
<a href="#">Hazardous</a>		Hamilton
		Libby Flathead Valley St. Mary Browning Frenchtown Missoula Seeley Lake Great Falls
<a href="#">Very Unhealthy</a>		
<a href="#">Unhealthy</a>		Helena Lewistown Billings
<a href="#">Unhealthy for Sensitive Groups</a>		Butte Bozeman Birney Broadus Malta

<a href="#">Moderate</a>	Sidney
<a href="#">Good</a>	West Yellowstone

***Wildfire Smoke Update for Friday, August 28, 2015 4:48 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=977>

**Today's Report and Forecast**

An Air Quality Alert has been issued for all counties in Montana due to elevated particulate concentrations.

The alert has been expanded since this morning to include all of eastern Montana due to the significant smoke on satellite and increasing ground level concentrations in Sidney, Broadus, and Birney.

Air quality in Hamilton is currently [HAZARDOUS](#).

Air quality in Flathead Valley, Browning, Frenchtown, Missoula, Seeley Lake, and Great Falls is currently [VERY UNHEALTHY](#).

Air quality in Libby, St. Mary, Helena, Butte, Lewistown, Billings, Malta, Birney, and Broadus is currently [UNHEALTHY](#).

Air quality in Bozeman and Sidney is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [HAZARDOUS](#), state and local health officials recommend that everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should remain indoors.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

The heavy smoke concentrations we saw this morning over the Northwestern section of the state have subsided slightly, with cumulative concentrations in Libby and St. Mary dropping from [VERY UNHEALTHY](#) to [UNHEALTHY](#) category. Cumulative 24-hr concentrations in Hamilton continue to stay in the [HAZARDOUS](#) category.

Butte, Malta and Broadus have seen cumulative concentrations increase from the morning, from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [UNHEALTHY](#). Elsewhere, concentrations have been varied, with hourly concentrations increasing in the Missoula area, while decreasing in Helena and Great Falls. Cumulative concentrations in these areas have remained the same as this morning, ranging from [UNHEALTHY](#) to [VERY UNHEALTHY](#). Concentrations have also increased significantly in Birney and Broadus this afternoon as a dense plume of smoke can be seen moving across eastern Montana this



afternoon on satellite imagery. For this reason the Air Quality Alert has been expanded to include more of eastern Montana. The alert now covers the entire state.

Smoke is still impacting the state, a situation which is not likely to change much until the cold front moves across the area Saturday and Sunday. The ridge of high pressure will remain over the area today and the early part of tomorrow. On Saturday afternoon, the cold front will move from west to east, pushing the ridge to the east and ushering in a cooler and more active pattern for next week. The advancing cold front will create the potential for gusty winds with little to no moisture associated with the front. This may increase the chance for active fire growth tomorrow afternoon, so we may see conditions deteriorate further before they get better. Additional moisture is expected on Sunday as a low pressure trough starts to move south towards British Columbia. This will hopefully bring much needed rain to the active fires in Idaho, Washington, and Montana, and further help decrease the smoke. Fortunately, it looks like this low pressure trough will continue to impact the area next week, hopefully mitigating to the seemingly endless flow of smoke into the region.

Overall, expect air quality impacts ranging from [UNHEALTHY](#) to [HAZARDOUS](#) in western Montana, and [UNHEALTHY FOR SENSITIVE GROUPS](#) to [UNHEALTHY](#) in central and eastern Montana through tomorrow afternoon. We may see conditions worsen ahead of the cold front tomorrow as increased winds fuel fire activity and create more smoke. After the passage of the front expect conditions to improve compared to this week in most locations.

### Today's Summary

Air quality impacts ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [HAZARDOUS](#) will continue through tomorrow morning. We will start to see improvement tomorrow afternoon/evening when a cold front moves through the area and the ridge of high pressure moves to the east. Cooler, more active weather behind the front will hopefully mitigate impacts compared to this week. However, smoke is likely to continue to impact some areas, especially along the Idaho/Montana border, for the foreseeable future.

The view from the KPAX- St. Patrick's Hospital Eyecam this afternoon:



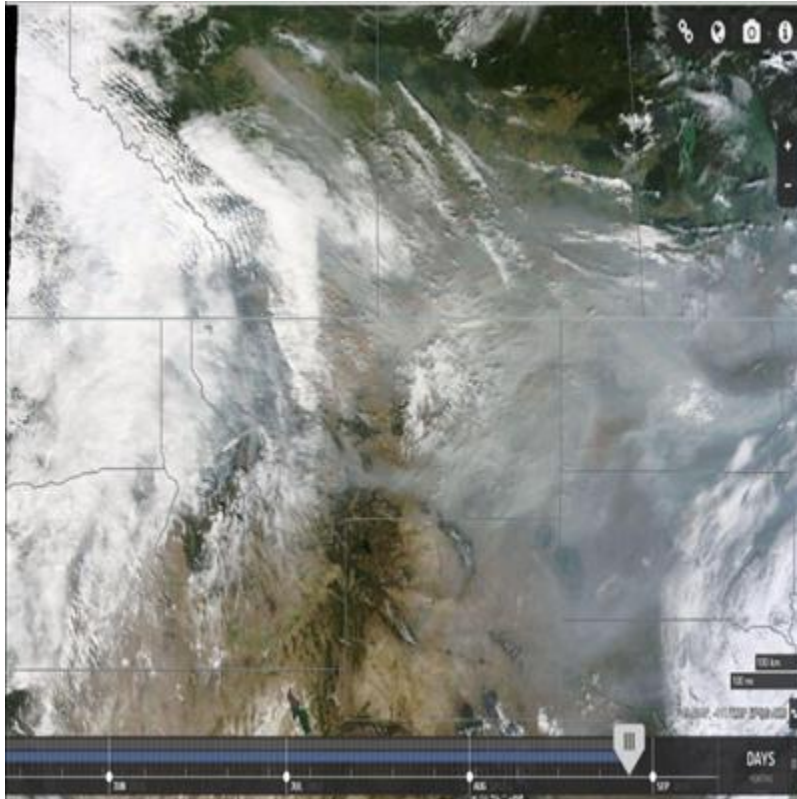
Source: [KPAX](#)

The view from the KXLF Clock Tower in Butte this afternoon:



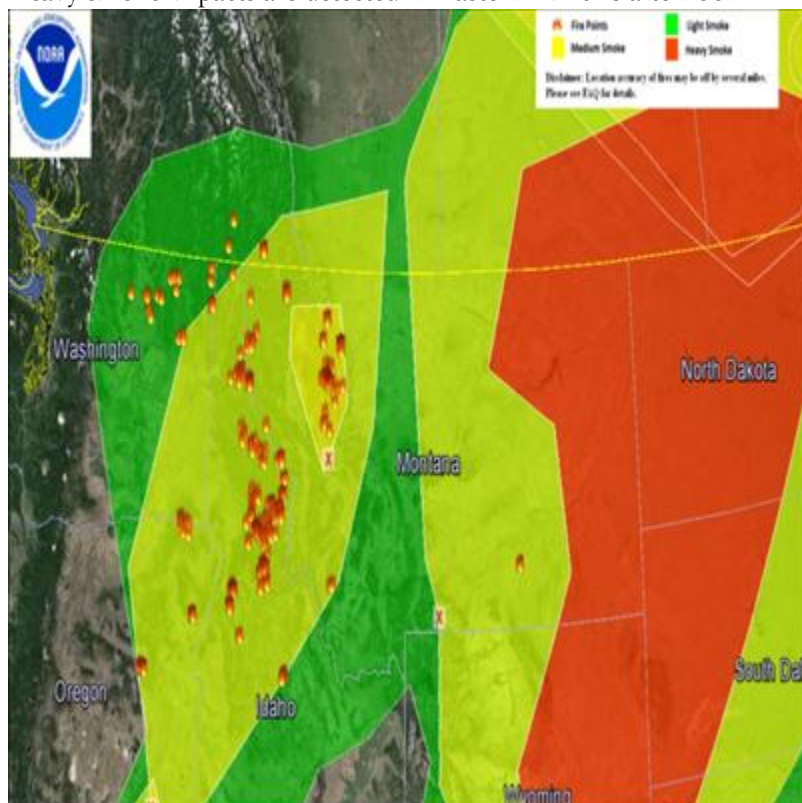
Source: [KXLF](#)

A large plume of smoke is seen covering eastern Montana and much of the Dakotas:



Source: [NASA](#)



Heavy smoke impacts are detected in Eastern MT this afternoon:



Source: [HMS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
<a href="#">Hazardous</a>		Hamilton
<a href="#">Very Unhealthy</a>		Flathead Valley Browning Frenchtown Missoula Seeley Lake Great Falls
<a href="#">Unhealthy</a>		Libby, St. Mary Helena Butte Lewistown Billings Malta Birney Broadus
<a href="#">Unhealthy for Sensitive Groups</a>		Bozeman Sidney

 <a href="#">Moderate</a>	
 <a href="#">Good</a>	

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1630Z August 28, 2015

SMOKE

Pacific Northwest/Central US/Southern Canada:

Large wildfires in the Pacific Northwest continue to produce moderately dense to very dense smoke that is primarily observed in northwest California, Oregon, Washington, Idaho, Montana, North Dakota, western Minnesota and Illinois extending as low as Kansas. Another area of light density plume is seen in southern US. The smoke originating from the Pacific NW is obscured by lots of cloud, which restricted visual observation of the full extent of the smoke. The second plume covers southern Missouri, southeast Oklahoma, most of Texas and is heading south into the Gulf. The northern patch of smoke is heading north into Canada. The light to moderate density smoke is visible in southern British Columbia, Alberta, Saskatchewan, Manitoba and western Ontario.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H281633.html>

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AUGUST 29, 2015

**PM2.5 Location(s):** Birney, Broadus, Butte, Flathead, Frenchtown, Hamilton, Helena, Lewistown, Libby, Malta, Missoula, Ncore, Sidney

**PM10 Location(s):** Thompson Falls, Whitefish, Kalispell, Butte, Columbia Falls, Libby, Missoula

**Synopsis:** Satellite imagery once again shows a large amount of smoke over almost all of Montana. This smoke is being trapped under a ridge of high pressure that has been over the area since Sunday. The 29<sup>th</sup> is expected to be the last day or significant smoke impacts before a cold front causes improvement in many areas on the 30<sup>th</sup>.

### Documentation:

*Wildfire Smoke Update for Saturday, August 29, 2015 9:33 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=978>

### Today's Report and Forecast

An Air Quality Alert has been issued for all counties in Montana due to elevated particulate concentrations.

Air quality in Hamilton, Missoula, and Frenchtown is currently **HAZARDOUS**.

Air quality in Flathead Valley, Browning, Seeley Lake, Helena, Butte, Malta, Sidney, and Broadus is currently **VERY UNHEALTHY**.

Air quality in Libby, St. Mary, Great Falls, Bozeman, Lewistown, Billings, and Birney is currently **UNHEALTHY**.

When air quality is **HAZARDOUS**, state and local health officials recommend that everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should



remain indoors.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

Air quality continues to range from [UNHEALTHY](#) to [HAZARDOUS](#) across almost the entire state this morning. Cumulative exposure is currently [HAZARDOUS](#) in Hamilton, Missoula, and Frenchtown, [VERY UNHEALTHY](#) in Flathead Valley, Browning, Seeley Lake, Helena, Butte, Malta, Sidney, and Broadus, and [UNHEALTHY](#) in Libby, St. Mary, Great Falls, Bozeman, Lewistown, Billings, and Birney. West Yellowstone has avoided the significant smoke impacts over the past day and is currently reporting [GOOD](#) air quality.

Smoke and poor air quality is expected to persist across the state for most of today as we await a change in weather pattern this evening into tomorrow. Winds will be increasing today ahead of a cold front that is expected to move through the area later tonight. The increasing wind, along with the hot and dry weather has prompted widespread red flag warnings across Montana, Idaho and Washington. Any increase in fire activity could lead air quality to further deteriorate throughout the region this afternoon. There is not much moisture associated with the initial front that will move through tonight, so we may not see the smoke clear out much, especially if fire activity across the region increases this afternoon. The chance of precipitation increases tomorrow as another cold front is expected to move through the area. The cold front should help clear the smoke from many areas. Next week, ventilation is expected to improve over the area compared with the stagnant conditions under the ridge of high pressure. The increased ventilation will likely lead to more intermittent smoke impacts with periods of improved air quality. However, without substantial rain over the fires, we will likely see smoke impacts continue for the foreseeable future.

Overall, expect air quality ranging from [UNHEALTHY](#) to [HAZARDOUS](#) throughout the day with conditions possibly deteriorating as fire activity increases under red flag warnings today. We will hopefully start to see improvement overnight tonight and on Sunday as the ridge of high pressure is finally pushed to the east.

Another update will be posted on Sunday morning unless significant changes occur.

### **Today's Summary**

Air quality has deteriorated further across Montana this morning with [HAZARDOUS](#) levels now impacting Hamilton, Missoula, and Frenchtown. All other areas are experiencing air quality in the [UNHEALTHY](#) to [VERY UNHEALTHY](#) category. West Yellowstone has avoided much of the smoke the last two days. Expect conditions to persist, or worsen, today as winds increase across the area. Hopefully we start to see improvement overnight tonight or Sunday, as two cold fronts move through the area.

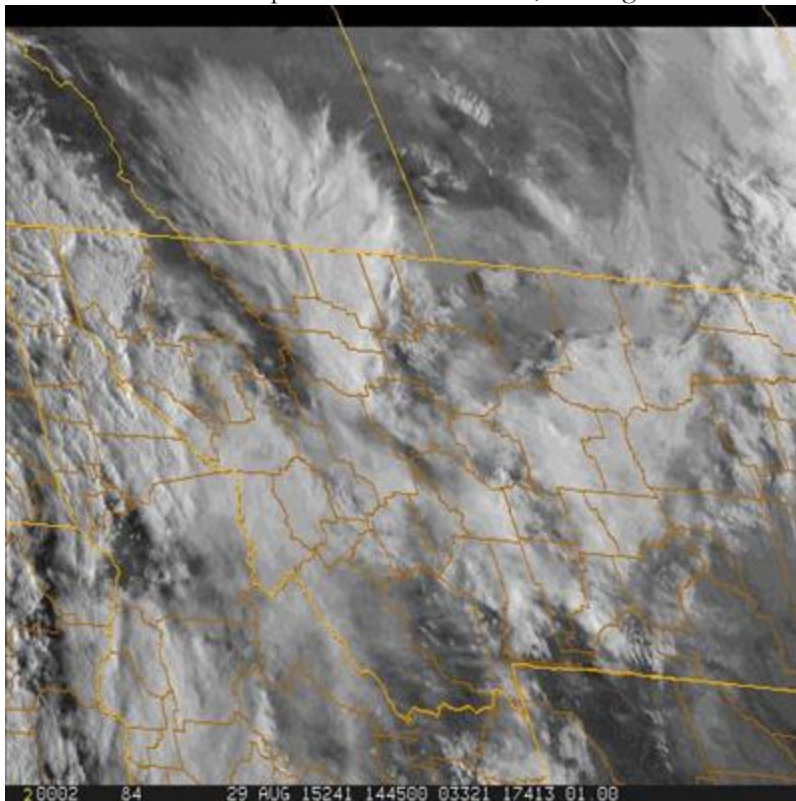
Another update will be posted on Sunday morning unless significant changes occur.

Hazardous conditions are present in Missoula this morning.



Source: [KTVQ](#)

Increased cloudiness is present across the state, with significant smoke under the clouds.



Source: [NWS](#)

Fire activity across the west continues to cause impacts in the region.



Source: [USFS](https://www.usfs.gov/)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<div></div> <a href="#">Hazardous</a>	Hamilton Missoula Frenchtown
<div></div> <a href="#">Very Unhealthy</a>	Flathead Valley Browning Seeley Lake Helena Butte Malta Sidney Broadus
<div></div> <a href="#">Unhealthy</a>	Libby St. Mary Great Falls Bozeman Lewistown Billings

		Birney
	<a href="#">Unhealthy for Sensitive Groups</a>	
	<a href="#">Moderate</a>	
	<a href="#">Good</a>	West Yellowstone

#### NOAA Text Description: Saturday, August 29, 2015

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1730Z August 29, 2015

#### SMOKE

Northwestern and Central US/Gulf of Mexico/Great Lakes/Ohio Valley/Southern Canada:

An expansive area of thin to moderately dense smoke covers much of the central US and southern Canada as well as portions of the northwestern US, though clouds were partially obscuring much of that region. Smoke stretches southward through the Central US into Arkansas, Louisiana, and Texas as well as an extension reaching far northeastern Mexico and the western Gulf of Mexico. The smoke wraps northeastward then along a frontal boundary towards the Ohio/Tennessee Valleys though scattered cloud cover made detection more difficult. All of this smoke is originating from large wildfires that continue to burn in the northwestern US states, of Oregon, Washington, Idaho, and Montana. A Pacific storm system moving across that region today will hopefully help to reduce the fire activity.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H291744.html>

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AUGUST 30, 2015

**PM2.5 Location(s):** Broadus, Frenchtown, Hamilton, Helena, Missoula, Ncore

**Synopsis:** While many areas saw concentrations steadily improve throughout the day due to a cold front moving through the area, 24-hour average values were still elevated in many communities by the end of the day.

#### Documentation:

*Wildfire Smoke Update for Sunday, August 30, 2015 11:49 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=979>

#### Today's Report and Forecast

An Air Quality Alert has been issued for all counties in Montana due to elevated particulate concentrations.

Air quality in Hamilton is currently [HAZARDOUS](#).

Air quality in Frenchtown and Missoula is currently [VERY UNHEALTHY](#).

Air quality in Libby, Flathead, Seeley Lake, Helena, Great Falls, Malta and Sydney is currently [UNHEALTHY](#).

Air quality in Lewistown, Birney and Broadus is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [HAZARDOUS](#), state and local health officials recommend that everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should remain indoors.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Areas across Montana are finally getting a brief respite today from smoke impacts. Many monitoring stations are showing improvement this morning. St. Mary and Browning have both seen hourly concentrations fall to the [GOOD](#) category for most of the morning, but are reporting cumulative concentrations in the [UNHEALTHY FOR SENSITIVE GROUPS](#) and [UNHEALTHY](#) categories, respectively. This 24-hr average is likely to continue to improve as smoke conditions in those areas clear. The same can be said for Butte, Billings and Birney, all of which have had a few hours falling into the [GOOD](#) category. Butte's cumulative concentrations are still considered [UNHEALTHY](#), but as we've seen this morning, smoke impacts have greatly subsided. Birney's hourly concentrations have been excellent this morning, but due to the smoke impacts from yesterday, the cumulative average is still falling in the [UNHEALTHY FOR SENSITIVE GROUPS](#).

The state is expecting another cold front to move through this afternoon, bringing the chance for showers and thunderstorms. This will hopefully bring much needed rain to the active fires in Idaho, Washington, and Montana, and further help decrease the smoke. Monday and Tuesday will likely see dryer conditions with light winds, thus transporting smoke from fires in Washington, Idaho, and Montana, and increasing smoke concentrations again. Fortunately, the week looks to be somewhat unsettled, so although smoke might persist in some locations, it's likely to not as concentrated as we saw last week.

Overall, expect air quality impacts ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [HAZARDOUS](#) throughout the state, with conditions improving this afternoon in most locations.

Another update will be posted on Monday morning unless significant changes occur.

#### **Today's Summary**

Air quality impacts ranging from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [HAZARDOUS](#) are currently seen, however, we are expecting to see improvement throughout the afternoon. Smoke impacts should continue to decline today, although the break is likely to be short-lived as smoke is expected to return to Montana.

Another update will be posted on Monday morning unless significant changes occur.

**An Air Quality Alert has been issued for all counties in Montana due to elevated particulate concentrations.**

**Air quality in Hamilton is currently [HAZARDOUS](#).**



Air quality in Frenchtown and Missoula is currently [VERY UNHEALTHY](#).

Air quality in Libby, Flathead, Seeley Lake, Helena, Great Falls, Malta and Sydney is currently [UNHEALTHY](#).

Air quality in Lewistown, Birney and Broadus is currently [UNHEALTHY FOR SENSITIVE GROUPS](#).

When air quality is [HAZARDOUS](#), state and local health officials recommend that everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should remain indoors.

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Clear skies over Lake McDonald this morning:



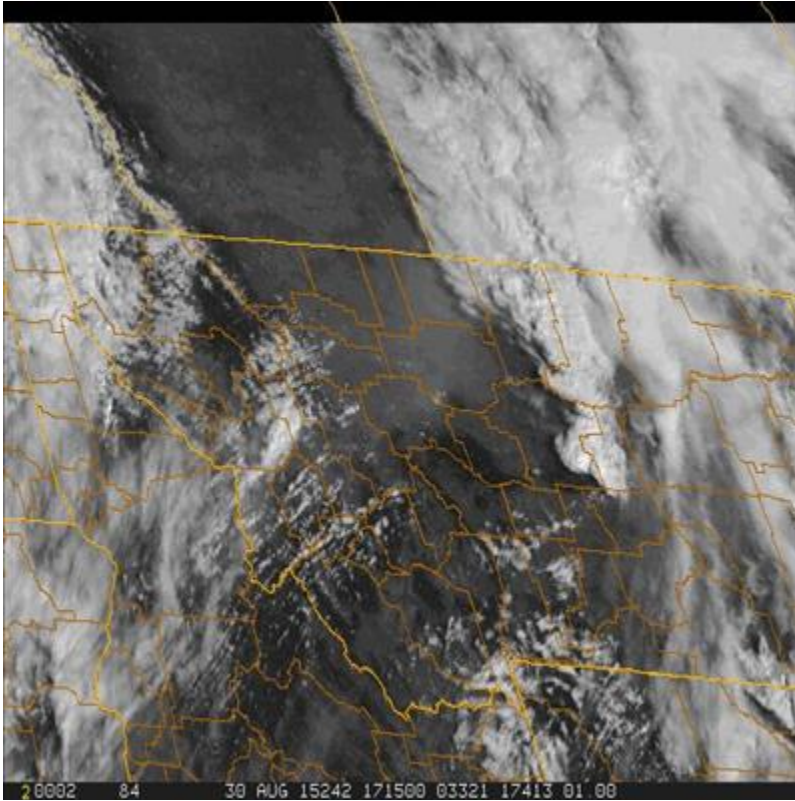
Source: [NPS](#)

The view from the KXLf Clock Tower in Butte this morning:



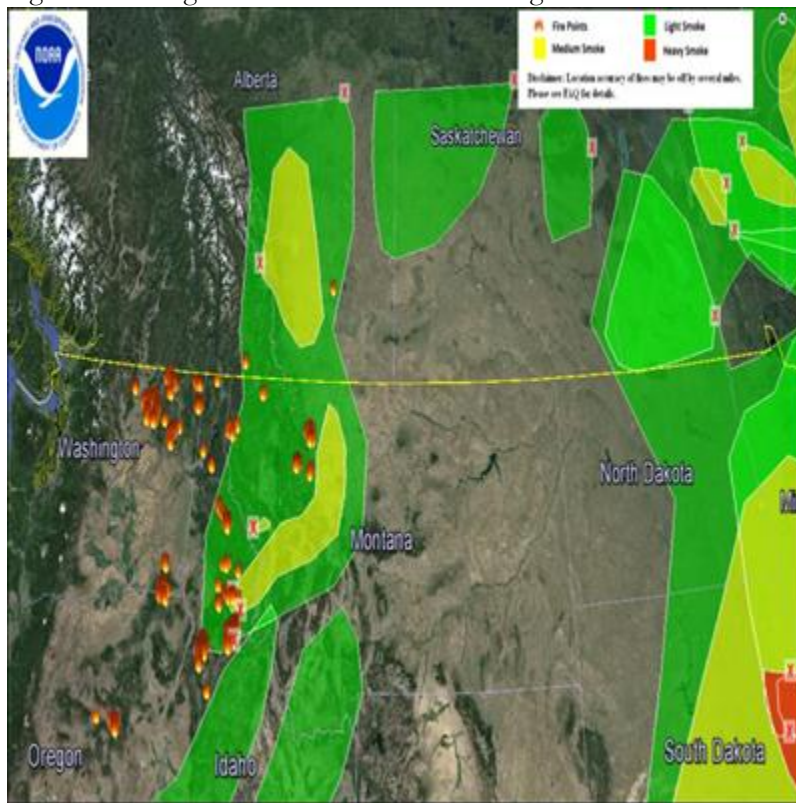
Source: [KXLf](#)

Light smoke in Western Montana:



Source: [NOAA](#)

Light smoke lingers in some areas this morning:



Source: [HMS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
	<a href="#">Hazardous</a>	Hamilton
	<a href="#">Very Unhealthy</a>	Frenchtown Missoula
	<a href="#">Unhealthy</a>	Libby Flathead Seeley Lake Helena Great Falls Malta Sydney
	<a href="#">Unhealthy for Sensitive Groups</a>	Lewistown Birney Broadus
	<a href="#">Moderate</a>	Bozeman Billings

**NOAA Text Description:**

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1745Z August 30, 2015

**SMOKE:**

North Idaho/Northwest Montana/West and Southern Canada/Great Lakes/Central  
US/Southern Plains:

An expansive area of moderately dense to very dense smoke covers much of the central US and southern Canada with the pockets of most dense smoke from east Iowa to Lake Superior, near the intersection of Minnesota, Iowa, and South Dakota, and over the Texas Panhandle into southeast New Mexico. Smoke stretches southward through the Central US to southern Texas and extreme northern Mexico. All of this smoke is originating from large wildfires that continue to burn in the northwestern US states of Oregon, Washington, Idaho, and Montana. Thin to moderately dense smoke extends northward from closer to the wildfires across west Montana, Alberta, Saskatchewan, and into southwestern Northwest Territories. While much of this smoke is obviously from the northwest US fires, there is also be some added smoke that had traveled across the Pacific from Siberian wildfires that is mixing in.

Southwest Montana/Southern Idaho/Nevada/Oregon/California:

A stream of thin smoke is seen extending northeast from off the California coast to central Idaho. This and another small patch of thin smoke just west of Oregon is believed to be remnant Siberian wildfire smoke that is being brought in by the west coast trough. Asian dust may also be mixing in with this smoke plume. Further east, another plume of thin smoke reaches from central Nevada to far southwest Montana and is likely smoke originating from wildfires in California's Sierra Nevada range.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015H301751.html>



**Summary of Exceptional Events**

Date	Site	24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Reason
<a href="#">9/25/2015</a>	Libby	38.3	The Goat Rock Complex fire, located to the south of Libby sent smoke into the valley. This smoke was then trapped under an overnight inversion.
<a href="#">9/28/2015</a>	Libby	48.9	Smoke from a fire located to the south of Libby, MT can be seen on satellite imagery. This smoke is causing localized but significant impacts.
<a href="#">9/29/2015</a>	Libby	80.9	

SEPTEMBER 25, 2015

**PM2.5 Location(s):** Libby

**Synopsis:** The Goat Rock Complex Fire, located to the south of Libby sent smoke into the valley. This smoke was then trapped under an overnight inversion.

**Documentation:**

*Wildfire Smoke Update for Friday, September 25, 2015 3:22 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=986>

**Today's Report and Forecast**

PM2.5 impacts have remained [GOOD](#) for most of the state today, with the exception of far northwest Montana, where the Libby and Thompson Falls monitors have reached elevated concentrations. Currently, Libby is reporting [UNHEALTHY](#) air quality, due to elevated cumulative 8-hour and 24-hour concentrations. Thompson Falls reached [UNHEALTHY FOR SENSITIVE GROUPS](#), also due to cumulative exposures. Besides some weak morning inversions in the Libby valley, the elevated concentrations the last couple of days are due to fires directly to the southwest, around the Goat Rock Complex, and a couple of hot spots identified by the MODIS satellite. The Thompson Falls monitor is also seeing effects from hot spots from the south-southwest.

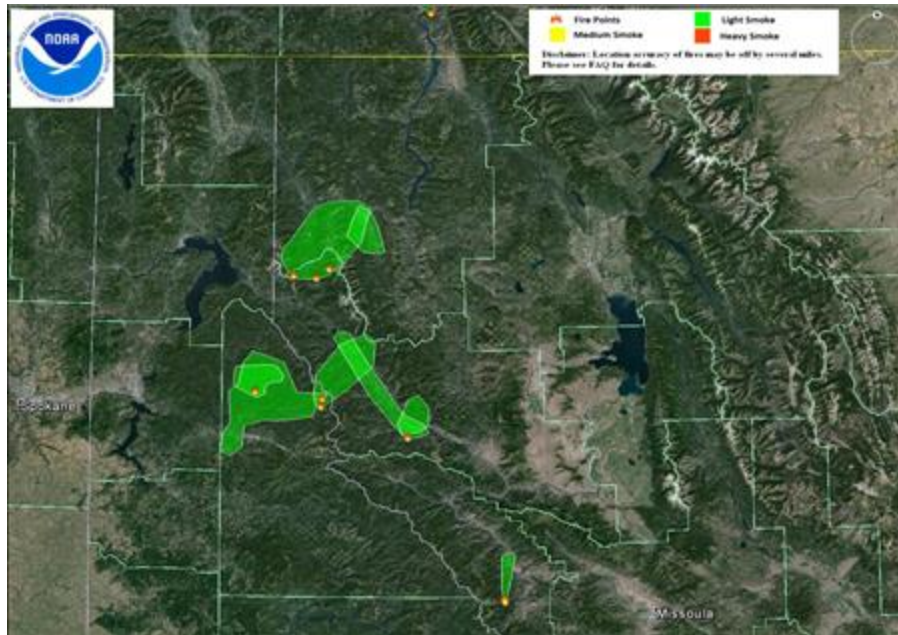
As seen in the downward trend in the hourly readings, the air quality in northwest Montana is expect to continue improving throughout the day as warming temperatures increase mixing. By tomorrow, a cold front is expected to arrive, with strong west-southwest winds aloft, which will help push lower hanging warm air up, increasing mixing and dispersion. The storm system will remain relatively dry, with some chance of precipitation in northwest Montana.

Expect air quality conditions in the [MODERATE](#) to possibly the [UNHEALTHY](#) range in northwest Montana due to some wildfire activity in close proximity, coupled with some weak inversions in valleys which will trap overnight air. Expect [GOOD](#) air quality conditions everywhere else over the weekend, as the system moving through should reduce the chances of any lingering smoke.

**Today's Summary**

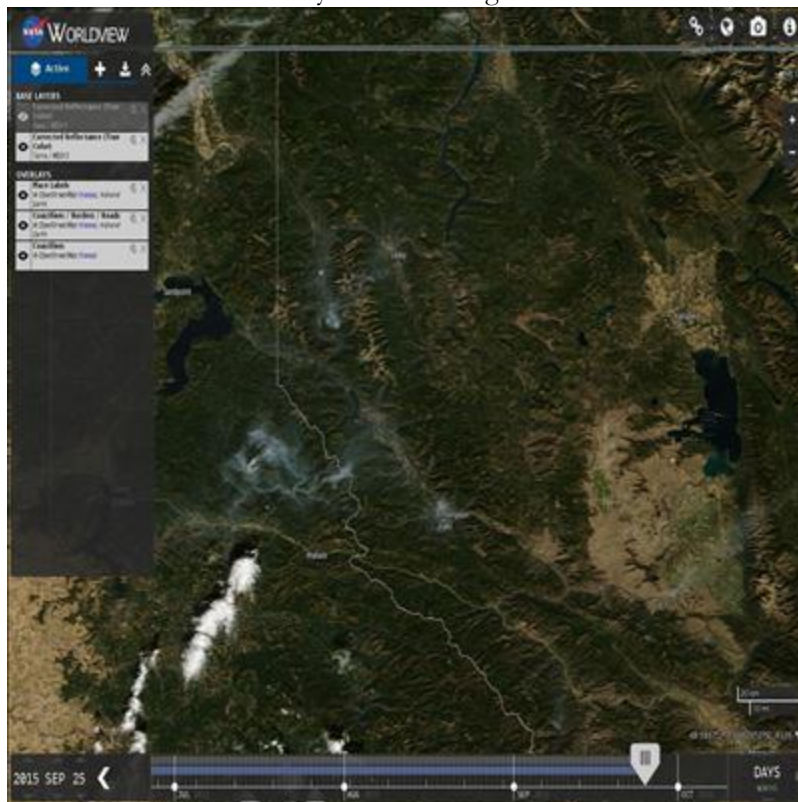
Air quality impacts reaching [UNHEALTHY](#) levels are being reported in Libby and [UNHEALTHY FOR SENSITIVE GROUPS](#) in Thompson Falls. This has been due to wildfire activity in northwest Montana, and just across the Idaho line. At all other reporting locations, levels have been GOOD. With the decrease in fire activity, and a cold front reaching the region this weekend, conditions are not expected to worsen.

Fires southwest of Libby and Thompson Falls are contributing to elevated particulate levels at those locations.



Source: [NOAA](#)

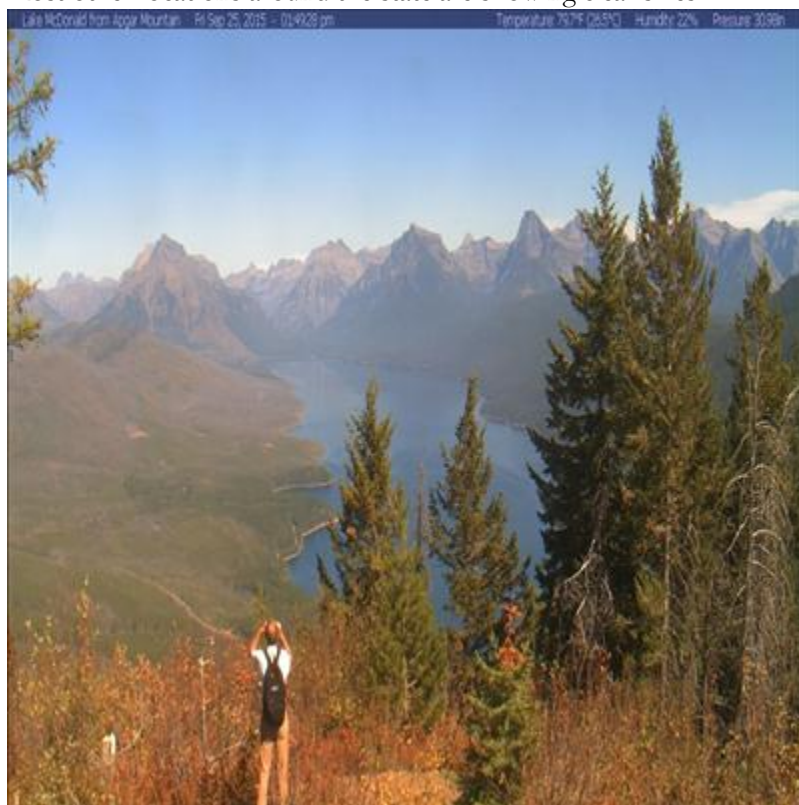
Smoke can be seen in today's satellite image.



Source: [NASA](#)



Most other locations around the state are showing clear skies.



Source: [NPS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's Health Effect Categories.

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Libby
<a href="#">Unhealthy for Sensitive Groups</a>	Thompson Falls
<a href="#">Moderate</a>	
<a href="#">Good</a>	All other reporting areas.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1630Z September 25, 2015

AEROSOLS:

Southern US/Gulf:

A plume of mostly stationary unknown aerosols are visible extending throughout southern US and into the northern and eastern portions of the Gulf. However, it is possible that some of these aerosols could be mixed with remnant smoke from the wildfires in the NW US.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015I251638.html>

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SEPTEMBER 28, 2015

**PM2.5 Location(s):** Libby

**Synopsis:** Smoke from a fire located to the south of Libby, MT can be seen on satellite imagery. This smoke is causing localized but significant impacts.

**Documentation:**

*Wildfire Smoke Update for Monday, September 28, 2015 4:24 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=987>

**Today's Report and Forecast**

Fire activity in Montana and Idaho continues to impact northwest Montana into early this week. Thompson Falls is currently at the [UNHEALTHY](#) level, and Libby is [UNHEALTHY FOR SENSITIVE GROUPS](#), but was also showing [UNHEALTHY](#) earlier today, all based on cumulative exposures. Frenchtown has reached [MODERATE](#) levels, as it looks as if some of the smoke is starting to make its way further south.

High pressure over the state will dominate the forecast through Wednesday. This will continue the stable and somewhat stagnant conditions with above normal temperatures during the days, and will also manifest itself in some stronger valley inversions on the western side of the state. Near-freezing morning temperatures are expected in these valley locations, which may result in some wood stove smoke impacts as well. A low pressure system is expected on Thursday, which will bring cooler temperatures and some showers are expected. This will hopefully help alleviate wildfire activity that has been the main contribution to elevated particulate levels in northwest Montana. Over the next couple days, air quality in the northwest part of the state will largely be dictated by the fire activity nearby, with increasing chances of smoke impacts further east into the state.

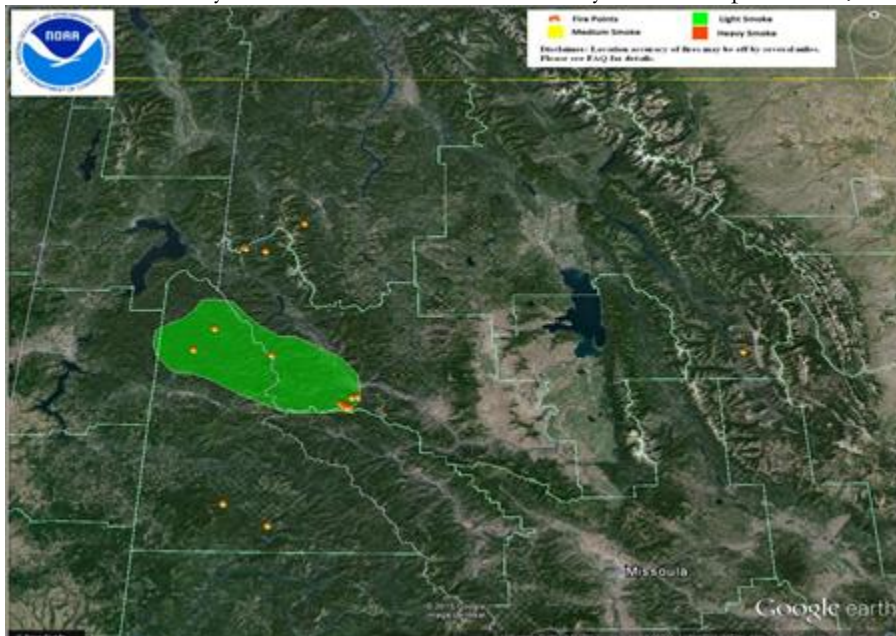
Expect air quality conditions in the [MODERATE](#) to [UNHEALTHY](#) range in northwest Montana due to wildfire activity in close proximity, coupled with some weak inversions in valleys which will trap overnight air. Expect [GOOD](#) to [MODERATE](#) conditions everywhere else: conditions better at locations further east from those fires.

**Today's Summary**

Air quality impacts reaching [UNHEALTHY](#) levels are being reported in Libby and Thompson Falls, due to cumulative exposures. This has been due to wildfire activity in northwest Montana, and just across the Idaho line. Frenchtown's cumulative exposure puts it at [MODERATE](#). At all other reporting locations, levels have been [GOOD](#). Smoke will make its way further east, and may impact those downwind locations. The high pressure will remain through Wednesday, so not much improvement is expected until the low pressure system arrives on Thursday.

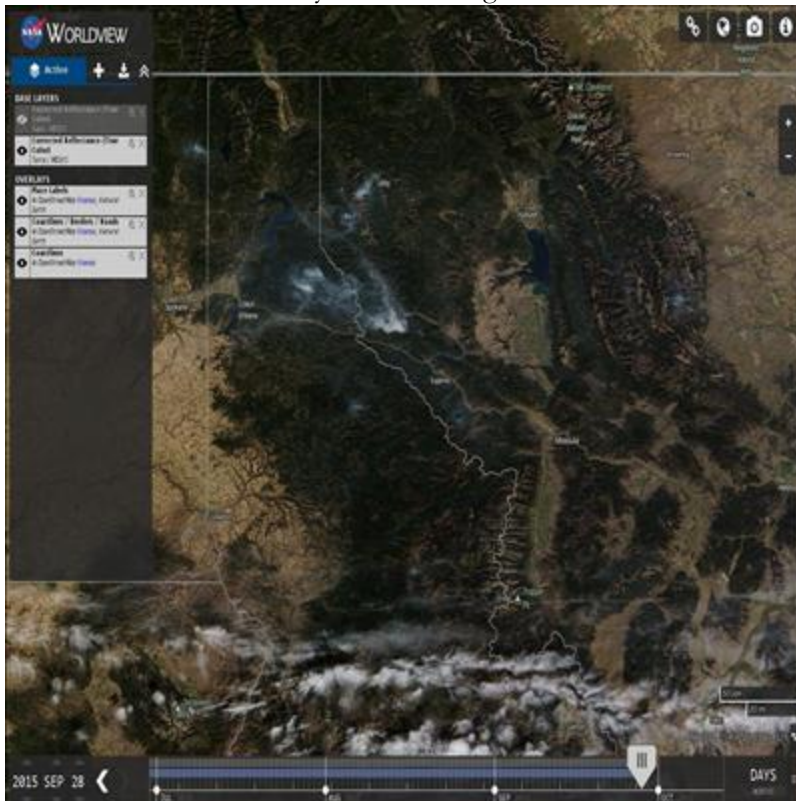


Current HMS analysis show fires southwest of Libby and Thompson Falls, along with the detected smoke.



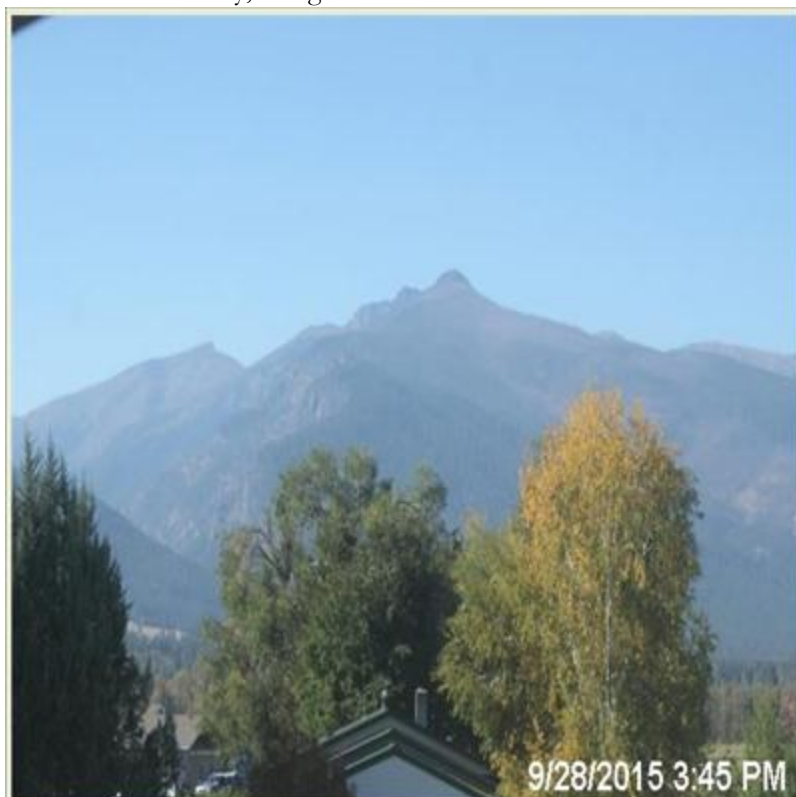
Source: [NOAA](#)

Smoke can be seen in today's satellite image.



Source: [NASA](#)

The Bitterroot Valley, along with most other locations around the state is showing clear skies.



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Libby Thompson Falls
<a href="#">Unhealthy for Sensitive Groups</a>	
<a href="#">Moderate</a>	Frenchtown
<a href="#">Good</a>	All other reporting locations.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1700Z September 28, 2015

SMOKE:

Pacific Northwest: A few wildfires along the Idaho-Montana border are producing a small area of localized light density smoke. No other areas of remnant smoke observed this morning.

SEPTEMBER 29, 2015

**PM2.5 Location(s):** Libby

**Synopsis:** Smoke from a fire located to the south of Libby, MT can be seen on satellite imagery. This smoke is causing localized but significant impacts.

**Documentation:**

*Wildfire Smoke Update for Tuesday, September 29, 2015 8:21 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=988>

**Today's Report and Forecast**

An Air Quality Alert has been issued until further notice in Lincoln and Sanders counties due to elevated particulate concentrations

The air quality alert has been expanded to include new areas of northern and central Montana due to decreased visibility and increasing particulate concentrations.

Air quality in Thompson Falls is currently [VERY UNHEALTHY](#),

Air quality in Libby is currently [UNHEALTHY](#),

When air quality is [VERY UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is [UNHEALTHY](#), state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#), state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

Fire activity in Montana and Idaho continues to impact northwest Montana, causing us to issue an air quality alert in the affected areas. Not a lot of information is yet known about the activity of those fires, except that satellite imagery and analysis identifies them as the main sources of smoke. Thompson Falls is currently at the [VERY UNHEALTHY](#) level, and Libby is [UNHEALTHY](#). Frenchtown has reached [MODERATE](#) levels, as it looks as if some of the smoke is starting to make its way further south.

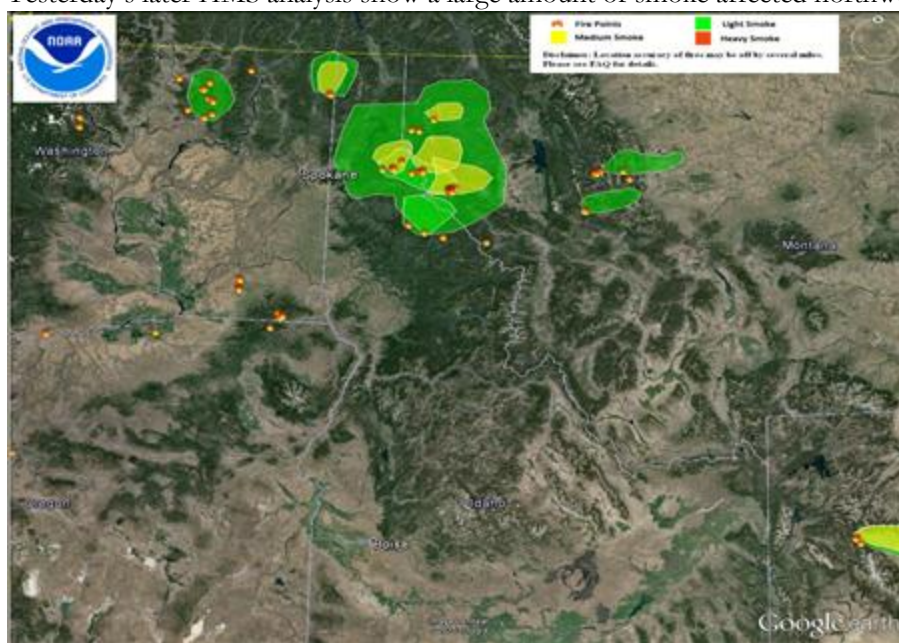
High pressure over the state will dominate the forecast through Wednesday evening. This will continue the stable and somewhat stagnant conditions with above normal temperatures during the days, and will also manifest itself in some stronger valley inversions on the western side of the state. Near-freezing morning temperatures are expected in these valley locations, which may result in some wood stove smoke impacts as well. A low pressure system is expected on Thursday, which will bring cooler temperatures and some showers are expected. This will hopefully help alleviate the wildfire activity that has been the main contribution to elevated particulate levels in northwest Montana. Over the next couple days, air quality in the northwest part of the state will largely be dictated by the fire activity nearby, with increasing chances of smoke impacts further east into the state.

Expect air quality conditions in the [UNHEALTHY FOR SENSITIVE GROUPS](#) to [VERY UNHEALTHY](#) range in northwest Montana due to wildfire activity in close proximity, coupled with some weak inversions in valleys which will trap overnight air. Expect [GOOD](#) to [MODERATE](#) conditions everywhere else: conditions better at locations further east from those fires.

### Today's Summary

Significant air quality impacts reaching [VERY UNHEALTHY](#) levels are being reported at Thompson Falls, and [UNHEALTHY](#) levels at Libby. This has been due to wildfire activity in northwest Montana, and just across the Idaho line. Frenchtown's cumulative exposure puts it at [MODERATE](#). At all other reporting locations, levels have been [GOOD](#). Smoke will make its way further east, and may impact those downwind locations. The high pressure will remain through Tuesday, so not much improvement is expected until the low pressure system arrives on Wednesday evening.

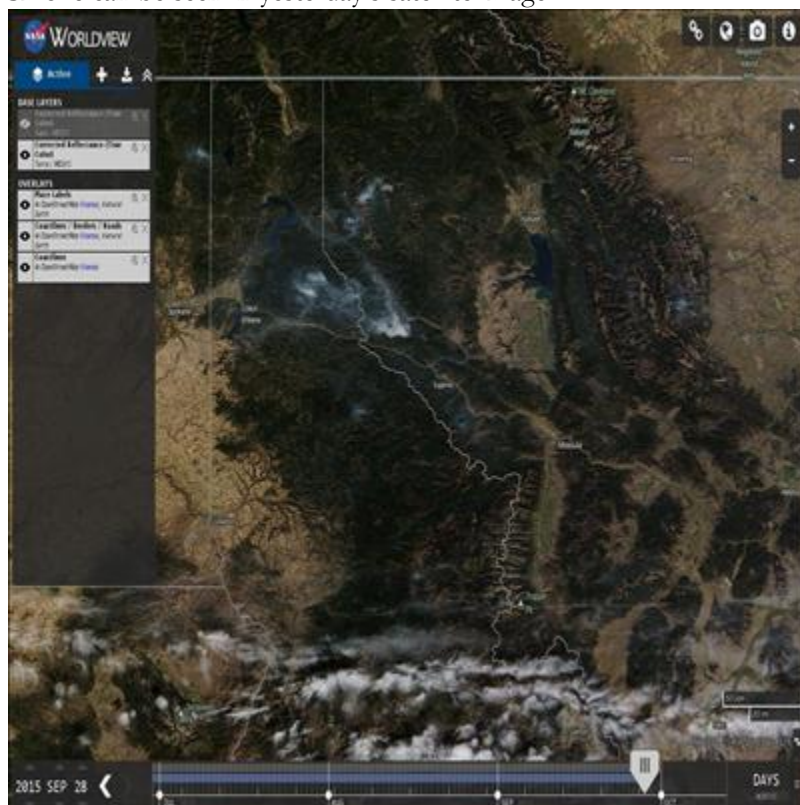
Yesterday's later HMS analysis show a large amount of smoke affected northwest Montana.



Source: [NOAA](#)



Smoke can be seen in yesterday's satellite image.



Source: [NASA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	Thompson Falls
<a href="#">Unhealthy</a>	Libby
<a href="#">Unhealthy for Sensitive Groups</a>	
<a href="#">Moderate</a>	Frenchtown
<a href="#">Good</a>	All other reporting locations.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1700Z September 29, 2015

SMOKE:

Pacific Northwest:

Several wildfires burning across northeast Washington, northern Oregon, northern Idaho and northwest Montana are producing localized, light density smoke.



## OCTOBER 2015

### Summary of Exceptional Events

Date	Site	24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Reason
<a href="#">10/1/2015</a>	Libby	69.0	Smoke from a fire located to the south of Libby, MT can be seen on satellite imagery. This smoke is causing localized but significant impacts.
<a href="#">10/2/2015</a>	Libby	58.3	
<a href="#">10/5/2015</a>	Libby	46.4	
<a href="#">10/6/2015</a>	Libby	63.5	

OCTOBER 1, 2015

**PM2.5 Location(s):** Libby

**Synopsis:** Smoke from a fire located to the south of Libby, MT can be seen on satellite imagery. This smoke is causing localized but significant impacts.

#### Documentation:

*Wildfire Smoke Update for Thursday, October 1, 2015 10:03 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=990>

### Today's Report and Forecast

The changing weather today does not yet seem to have alleviated much of the smoke in northwest Montana, as fire activity in that region continues to cause impacts, keeping us to continue the air quality alerts in place. Not much information is known about the activity of those fires, except that satellite imagery and analysis identifies them as the main sources of smoke in the northwest part of the state. Thompson Falls is currently at the [VERY UNHEALTHY](#) level, and Libby is [UNHEALTHY](#). Flathead Valley remains at [MODERATE](#) levels due to cumulative exposure, as it looks as if some smoke made its way into those valleys. Fires burning in the Lewis and Clark National Forest continue to impact the Rocky Mountain Front, and the Great Falls monitor is seeing [MODERATE](#) impacts as well. Broadus is also seeing [MODERATE](#) PM2.5 cumulative concentrations.

A low pressure system has moved in overnight, as some instability and clouds cover much of the region this morning. Unfortunately, this does not look to have affected much of the smoky areas yet. However, this system is expected to last and bring some moisture (especially along the Continental Divide) through today and then a strengthening low pressure system heads this way Saturday, with an increased chance of precipitation in much of the region. This will likely alleviate much of the smoke impacts.

Expect air quality conditions in the [UNHEALTHY FOR SENSITIVE GROUPS](#) to [VERY UNHEALTHY](#) range in northwest Montana through this morning.

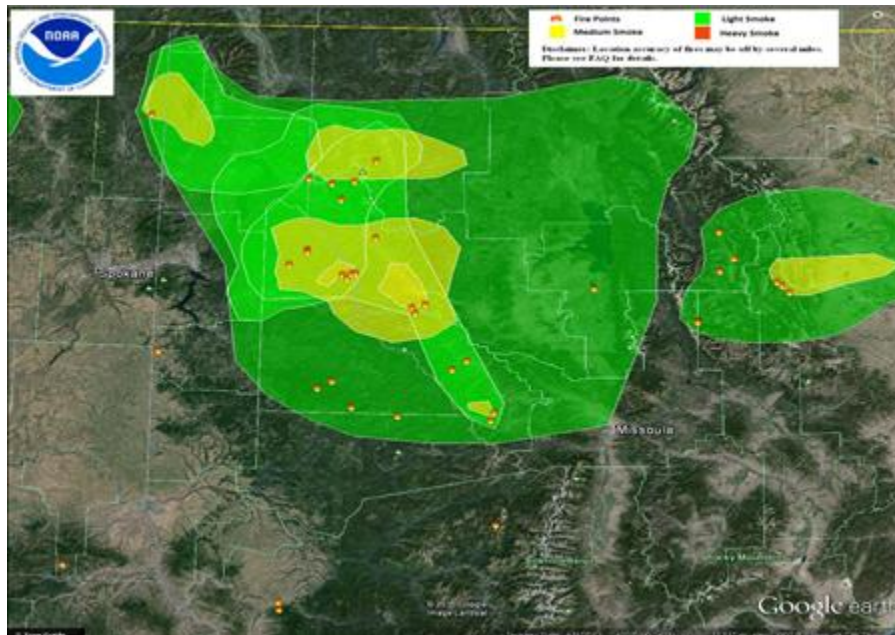
Expect [GOOD](#) to [MODERATE](#) conditions everywhere else, with chances of impacts in the Flathead Valley, the Missoula Valley, and the Rocky Mountain Front. Smoke impacts should nudge their way into better categories everywhere as the day continues...

### Today's Summary

Air quality impacts continue to reach [VERY UNHEALTHY](#) levels in Thompson Falls, and [UNHEALTHY](#) levels at Libby. This has been due to wildfire activity in northwest Montana, and just across the Idaho line. Flathead Valley, Great Falls, and Broadus cumulative exposure put them

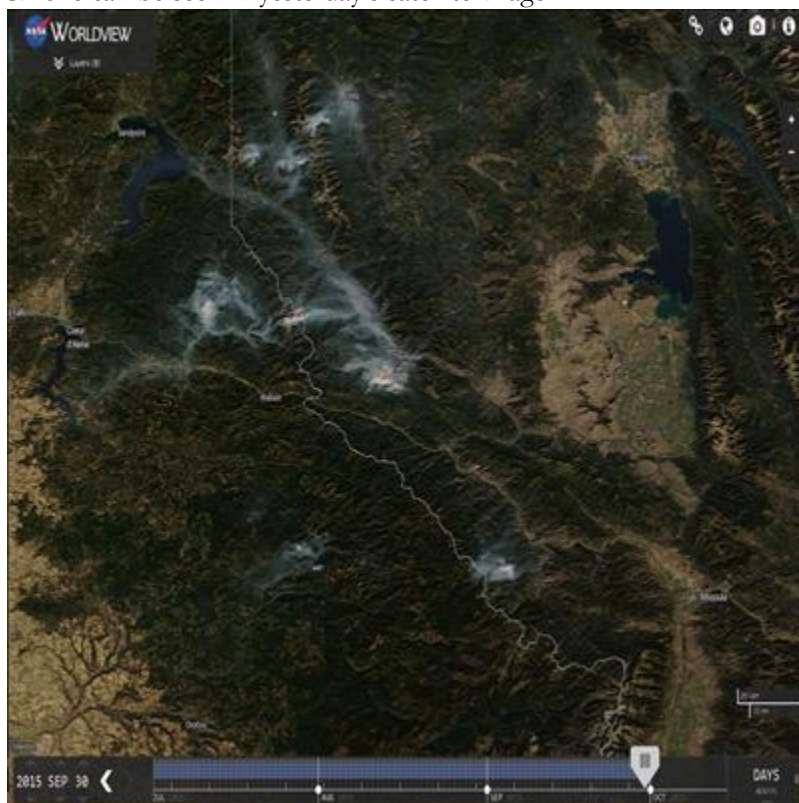
at [MODERATE](#). At all other reporting locations, levels have been [GOOD](#). The most significant impacts will continue in northwest Montana this morning, with some chances of smoke making its way to the Flathead Valley, the Missoula Valley, and the Rocky Mountain Front, downwind of the major fires identified by satellite imagery and analysis. The conditions should get better as the day goes on, as cloud cover, possible precipitation, increasing wind, and cooler temperatures should help suppress fire activity and increase dispersion.

Yesterday's later HMS analysis show a large amount of smoke affected northwest Montana and areas east of the Bob Marshall Wilderness.



Source: [NOAA](#)

Smoke can be seen in yesterday's satellite image.



Source: [NASA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	Thompson Falls
<a href="#">Unhealthy</a>	Libby
<a href="#">Unhealthy for Sensitive Groups</a>	
<a href="#">Moderate</a>	Great Falls Flathead Valley Broadus
<a href="#">Good</a>	All other reporting locations.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 0200Z October 01, 2015

SMOKE:

Pacific Northwest

Multiple wildfires burning in southern British Columbia, Washington, northern Idaho and western Montana are responsible for remnant light and moderate density smoke that remains confined to the said regions.

South Central Canada:

Numerous agricultural burns throughout southeastern Saskatchewan and northwest North Dakota are likely producing a light density smoke plume moving east, however it cannot be observed due to cloud cover.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015J010249.html>

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OCTOBER 2, 2015

**PM2.5 Location(s):** Libby

**Synopsis:** Smoke from a fire located to the south of Libby, MT can be seen on satellite imagery. This smoke is causing localized but significant impacts.

**Documentation:**

*Wildfire Smoke Update for Friday, October 2, 2015 11:18 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=991>

**Today's Report and Forecast**

**An Air Quality Alert has been issued until further notice in Lincoln and Sanders counties due to elevated particulate concentrations**

**The air quality alert has been expanded to include new areas of northern and central Montana due to decreased visibility and increasing particulate concentrations.**

**Air quality in Libby and Thompson Falls is currently UNHEALTHY,**

**When air quality is VERY UNHEALTHY, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.**

**When air quality is UNHEALTHY, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

**When air quality is UNHEALTHY FOR SENSITIVE GROUPS, state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.**

#### CURRENT SITUATION AND FORECAST

The Thompson Falls monitor has shown considerable improvement from this time yesterday; however Libby has not yet shown much lower concentrations than yesterday morning. Thompson Falls and Libby are both currently at the UNHEALTHY level. Frenchtown is at the MODERATE level due to cumulative exposure. Fires burning in the Lewis and Clark National Forest continue to impact the Rocky Mountain Front, and the Great Falls monitor still shows MODERATE impacts as well. Broadus and Birney are also seeing MODERATE PM2.5 cumulative concentrations.

A low pressure system has moved in, as some instability and clouds cover much of the region again today. Unfortunately, this has not had a huge effect on all of the smoky areas yet. Thompson Falls has seen notable improvement, but wildfires and lack of precipitation near Libby still have not caused concentrations to drop

considerably. The low pressure system is expected to strengthen today and into tomorrow, bringing in more moisture from the coast. A cold front is heading down from Canada on Saturday, and a wave of cold air will move down the Rocky Mountain Front. Montana is expected to see wrap-around precipitation, cooler temperatures, and possibly snow at some valley locations, which should not bode well for any concentrated smoke in the air.

Expect air quality conditions in the [MODERATE](#) to [UNHEALTHY](#) range in northwest Montana through this morning. Expect [GOOD](#) to [MODERATE](#) conditions everywhere else, with chances of impacts in the Flathead Valley, the Missoula Valley, and the Rocky Mountain Front. Smoke impacts should continue their nudge into better categories everywhere as the day continues. Greater relief from the smoke should be seen this weekend.

### Today's Summary

Air quality is currently at [UNHEALTHY](#) levels in Libby and Thompson Falls. Frenchtown, Great Falls, Birney and Broadus cumulative exposure put them at [MODERATE](#). At all other reporting locations, levels have been [GOOD](#). The most significant impacts will continue in northwest Montana this morning, with some chances of smoke making its way to the Flathead Valley, the Missoula Valley, and the Rocky Mountain Front, downwind of the major fires identified by satellite imagery and analysis. The low pressure system that moved in yesterday and brought some precipitation and cooler afternoon temperatures has begun to alleviate smoke impacts. This trend should continue through today, until a reinforcing low pressure trough, combined with a cold air mass from Canada this weekend speeds up smoke mitigation.

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Libby Thompson Falls
<a href="#">Unhealthy for Sensitive Groups</a>	
<a href="#">Moderate</a>	Frenchtown Great Falls Birney Broadus
<a href="#">Good</a>	All other reporting locations.

### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 0200 October 02 2015

SMOKE:

Mississippi River Valley:

Numerous agricultural burns in the lower Mississippi River Valley are collectively producing remnant light density smoke over Missouri, Arkansas, Louisiana, Mississippi, and Tennessee.



Pacific Northwest:

It is likely that there's remnant light density smoke across Washington, Idaho, and Montana from recent wildfires but it cannot be detected due to cloud cover.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015J020426.html>

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OCTOBER 5, 2015

**PM2.5 Location(s):** Libby

**Synopsis:** Smoke from a fire located to the south of Libby, MT can be seen on satellite imagery. This smoke is causing localized but significant impacts.

**Documentation:**

*Wildfire Smoke Update for Monday, October 5, 2015 10:43 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=992>

**Today's Report and Forecast**

**An Air Quality Alert has been re-issued until further notice in Lincoln and Sanders counties due to elevated particulate concentrations**

**Air quality in Thompson Falls is currently UNHEALTHY,**

**Air quality in Libby is currently UNHEALTHY FOR SENSITIVE GROUPS**

When air quality is VERY UNHEALTHY, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is UNHEALTHY, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is UNHEALTHY FOR SENSITIVE GROUPS, state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

#### CURRENT SITUATION AND FORECAST

The Thompson Falls monitor has climbed again this morning and is now at the UNHEALTHY level. Likewise, Libby has also climbed its way up to UNHEALTHY FOR SENSITIVE GROUPS. Everywhere else, conditions are GOOD.

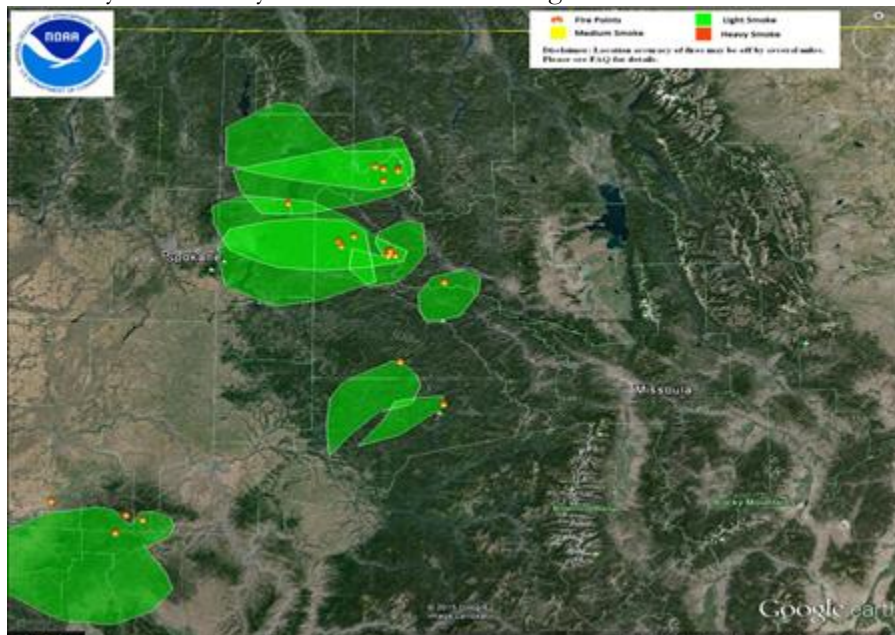
Despite some relief to northwest Montana over the weekend due to the low pressure disturbance, fire activity is beginning to impact Thompson Falls and Libby due to a building of high pressure over the area. Many western Montana valleys saw below freezing temperatures this morning as some inversion conditions settled in. Above normal temperatures during the day are also expected, both a result of the strengthening high pressure. No significant change is forecasted until Sunday morning, which could bring widespread precipitation and showers. Until then, wildfire smoke will be strongly dictated by fire activity in northwest Montana and northern Idaho over the coming days. In addition, with the cooler morning temperatures and the high pressure able to trap the overnight air in some valleys, we may also see PM2.5 impacts from wood stove smoke.

Expect air quality conditions in the [MODERATE](#) to [UNHEALTHY](#) range in northwest Montana for the coming days. Expect [GOOD](#) to [MODERATE](#) conditions everywhere else, with chances of impacts in western valleys due to overnight inversions and wood stove emissions.

### Today's Summary

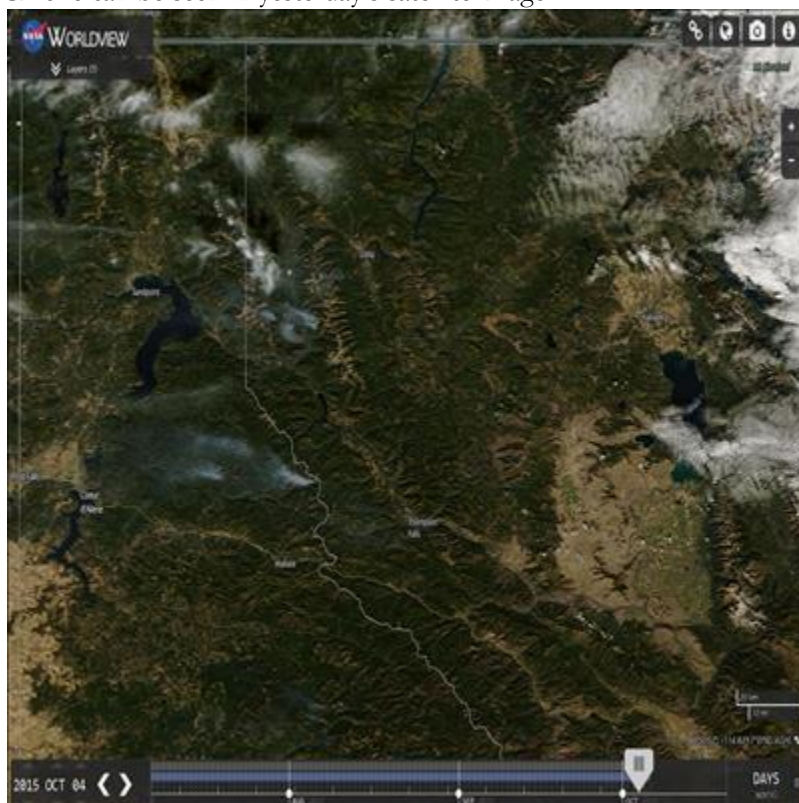
Air quality is currently at [UNHEALTHY](#) levels at Thompson Falls and [UNHEALTHY FOR SENSITIVE GROUPS](#) at Libby. At all other reporting locations, levels have been [GOOD](#). The most significant impacts will continue in northwest Montana, with some chances of smoke making its way to the Flathead Valley and the Missoula Valley, downwind of the major fires identified by satellite imagery and analysis. The weekend alleviated much of the smoke in northwest Montana, but the strengthening high pressure continued fire activity is impacting northwest Montana once again.

Yesterday's HMS analysis shows smoke affecting northwest Montana.



Source: [NOAA](#)

Smoke can be seen in yesterday's satellite image.



Source: [NASA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Thompson Falls
<a href="#">Unhealthy for Sensitive Groups</a>	Libby
<a href="#">Moderate</a>	
<a href="#">Good</a>	All other reporting locations.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1815Z October 5, 2015

SMOKE:

Western US:

A small patch of thin smoke was visible in morning GOES imagery over and just off the coasts of northwest California and southwest Oregon. This remnant smoke is from fires that have been burning in California,

Oregon, Washington, Idaho, and Montana for the past several days which has been pulled southward along the Pacific Coast by the large scale upper trough over the West. Additional small smoke plumes are analyzed close to the fire sources this morning, mostly in northern Idaho.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015J051826.html>

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OCTOBER 6, 2015

**PM2.5 Location(s):** Libby

**Synopsis:** Smoke from a fire located to the south of Libby, MT can be seen on satellite imagery. This smoke is causing localized but significant impacts.

**Documentation:**

*Wildfire Smoke Update for Tuesday, October 6, 2015 12:02 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=993>

**Today's Report and Forecast**

An Air Quality Alert has been issued until further notice in Lincoln and Sanders counties due to elevated particulate concentrations

Air quality in Libby is currently **UNHEALTHY**,

Air quality in Thompson Falls is currently **UNHEALTHY FOR SENSITIVE GROUPS**

When air quality is **VERY UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

When air quality is **UNHEALTHY**, state and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

When air quality is **UNHEALTHY FOR SENSITIVE GROUPS**, state and local health officials recommend that people with respiratory or heart disease, the elderly and children should limit prolonged exertion.

#### CURRENT SITUATION AND FORECAST

Thompson Falls and Libby are again seeing elevated particulate concentrations today, with Libby in the **UNHEALTHY** range and Thompson Falls at the **UNHEALTHY FOR SENSITIVE GROUPS** level. Flathead Valley and Seeley Lake are both at **MODERATE** due to cumulative exposures. Everywhere else, conditions are **GOOD**.

Despite some relief to northwest Montana over the weekend due to the low pressure, fire activity is once again impacting Thompson Falls and Libby due to the high pressure over the area. Satellite analysis from yesterday identifies active fire activity and smoke in the area. Libby is getting hit especially hard today, and yesterday's satellite imagery looks as if the [Clark Fork Complex fires](#) are the major contributors to the smoke. In addition, some western Montana valleys (including Libby) saw below freezing temperatures again this morning as some inversion conditions settled in. Libby may also be seeing a contribution from wood stove emissions as well. A weak disturbance is forecasted for tonight, which could bring some cloud cover, increase overnight temperatures, and weaken inversions. No significant change is forecasted until this weekend, when



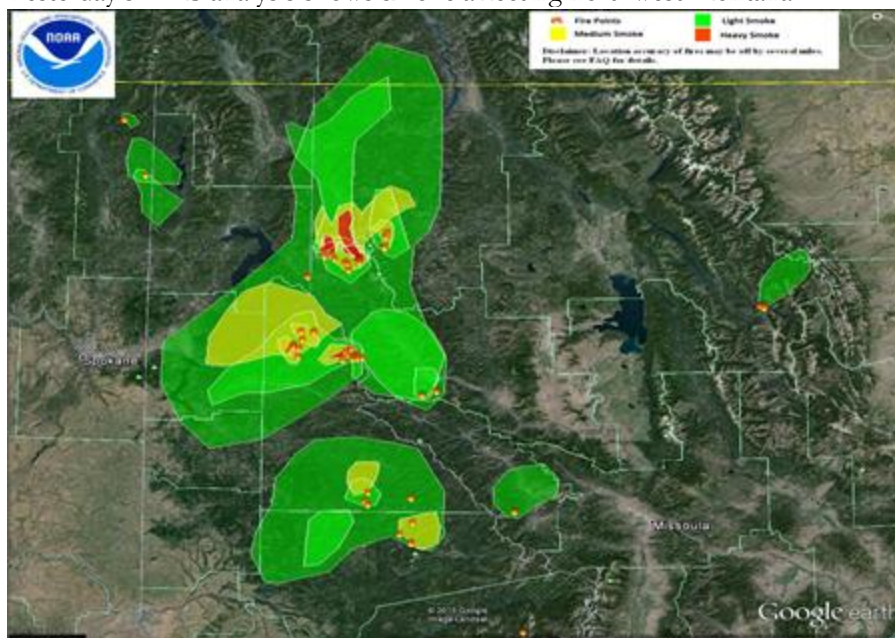
we may see precipitation and cooler daytime temperatures. Until then, wildfire smoke will be strongly dictated by fire activity in northwest Montana and northern Idaho over the coming days. In addition, with the cooler morning temperatures and the dominant high pressure able to trap the overnight air in some valleys, we may also see PM2.5 impacts from wood stove smoke.

Expect air quality conditions in the [MODERATE](#) to [UNHEALTHY](#) range in northwest Montana for the coming days. Expect [GOOD](#) to [MODERATE](#) conditions everywhere else, with chances of impacts in western valleys due to overnight inversions and wood stove emissions.

### Today's Summary

Air quality is currently at [UNHEALTHY](#) levels at Libby and [UNHEALTHY FOR SENSITIVE GROUPS](#) at Thompson Falls. Levels are [MODERATE](#) in Flathead Valley and Seeley Lake. At all other reporting locations, levels have been [GOOD](#). The most significant impacts will continue in northwest Montana near the hot spots, with some chances of smoke making its way to the Flathead Valley and the Missoula Valley, downwind of the major fires identified by satellite imagery and analysis. The high pressure ridge set up in the area will likely prevent significant changes in the immediate future.

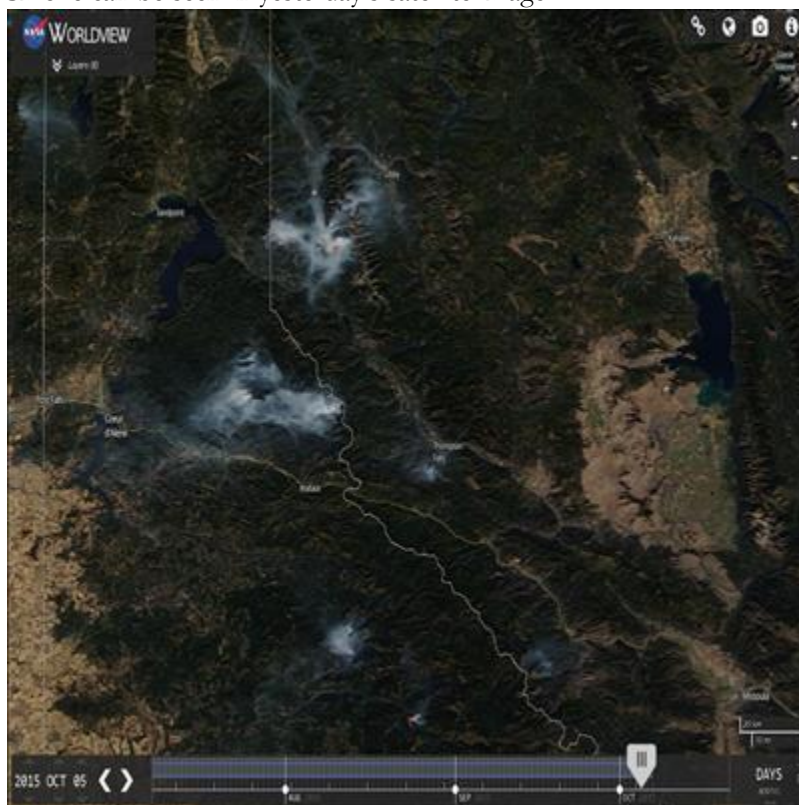
Yesterday's HMS analysis shows smoke affecting northwest Montana.



Source: [NOAA](#)



Smoke can be seen in yesterday's satellite image.



Source: [NASA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Libby
<a href="#">Unhealthy for Sensitive Groups</a>	Thompson Falls
<a href="#">Moderate</a>	Flathead Valley Seeley Lake
<a href="#">Good</a>	All other reporting locations.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 2315Z October 5, 2015

Currently:

Mississippi Valley/Southeast Texas:

Multiple fires across the eastern Arkansas, southeast Missouri and northwest Mississippi are producing light to moderate smoke. The larger fires in southeast Texas are emitting smoke across the region and into the Gulf of Mexico.

From Earlier Today

SMOKE:

Western US:

A small patch of thin smoke was visible in morning GOES imagery over and just off the coasts of northwest California and southwest Oregon. This remnant smoke is from fires that have been burning in California, Oregon, Washington, Idaho, and Montana for the past several days which has been pulled southward along the Pacific Coast by the large scale upper trough over the West. Additional small smoke plumes are analyzed close to the fire sources this morning, mostly in northern Idaho.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2015/2015J060318.html>

## 2016 EXCEPTIONAL EVENTS DOCUMENTATION

AUGUST 2016

### Summary of Exceptional Events

Date	Site	24-hr PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Reason
<a href="#">8/1/2016</a>	Hamilton	68.1	The Roaring Lion Fire, located near Hamilton, MT burned through over 3,000 acres in just a few hours on August 1, 2016. This fire caused smoke impacts in Hamilton throughout the first week of August.
<a href="#">8/2/2016</a>	Hamilton	40.4	
<a href="#">8/5/2016</a>	Hamilton	40.4	
<a href="#">8/6/2016</a>	Hamilton	36.7	
<a href="#">8/22/2016</a> And <a href="#">PM Update</a>	Hamilton	37.5	A handful of fires in the Selway-Bitterroot sent smoke in to Hamilton beginning at 6pm. The Moose fire, located 25 miles to the west of Hamilton looks to be the largest contributor of smoke.
<a href="#">8/28/2016</a>	Hamilton	57.7	A handful of fires in the Selway-Bitterroot sent smoke in to Hamilton beginning at about 4pm. The smoke began to clear around 3am the following morning.

Date	Site	24-hr PM <sub>10</sub> µg/m <sup>3</sup>	Reason
<a href="#">8/30/2016</a>	Thompson Falls	135	The Copper King Fire, located next to Thompson Falls, MT created significant air quality impacts in town.

AUGUST 1, 2016

**PM2.5 Location(s):** Hamilton

**Synopsis:** The Roaring Lion Fire, located near Hamilton, MT burned through over 3,000 acres in just a few hours on August 1, 2016. This fire caused smoke impacts in Hamilton throughout the first week of August.

#### Documentation:

***Wildfire Smoke Update for Monday, August 1, 2016 4:47 PM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=1070>

#### Today's Report and Forecast

Air quality has been deteriorating throughout the day in Hamilton. Winds died down on the Roaring Lion fire today, allowing smoke to more widely disperse around the Bitterroot Valley while the fire continues to burn. Air quality in Hamilton is currently **UNHEALTHY** as of 4pm. Air quality is expected to remain **UNHEALTHY** through the overnight period. Smoke from this fire has been moving north towards Missoula throughout the day, although it has remained above ground level so far.

Elsewhere, air quality has remained **MODERATE** in Butte, Dillon, and West Yellowstone as smoke from fires in Washington and Idaho continue to send light smoke over the state. Afternoon fire detection maps show continued fire behavior on the Cedar fire in Idaho, the Copper King fire near Thompson falls, and a

new 'North Tullock' fire being reported east of Hardin. Starting tomorrow, winds are expected to increase again, creating dangerous fire weather throughout southwest Montana. The National Weather Service has issued a red flag warning starting at 12pm tomorrow. Southwest winds will likely push the plume of smoke towards Hamilton. Depending on fire behavior tomorrow afternoon, this plume could lift above the town and keep smoke impacts moderate along the valley floor. However, due to the fire weather expected on and off for at least the next week, smoke impacts are expected in the Bitterroot.

Here is a rundown of the other fires impacting Montana this morning:

- The Copper King [Fire](#) located to the southeast of Thompson Falls has burned 700 acres with 0% contained and extreme fire behavior
- The Pioneer [F](#) near Boise is now 38,072 acres with 30% contained and extreme fire behavior
- The Cedar [Fire](#) in the Selway-Bitterroot Wilderness is still being reported at 490 acres although due to the remote location, size estimates are likely not up to date. This fire sent smoke towards the Missoula Valley yesterday.
- The Rail [Fire](#) in Oregon has burned 500 acres with extreme fire behavior
- The Range 12 [Fire](#) near Yakima, WA has burned 70,000 acres of grass and brush with active fire behavior.

#### Original Discussion:

Winds are expected to decrease a little today in between the low pressure system that moved through southern Canada yesterday and another that is expected to move through the state starting tomorrow. As this low pressure center approaches over the next 24 hours, winds will turn more southwesterly and become gusty. The strong winds and warm temperatures will likely fuel active fires and send smoke plumes far into Montana. Unfortunately, little to no precipitation is expected in most areas.

After the passage of this system, a ridge of high pressure will build into the state, leading once again to high temperatures but light winds. Smoke impacts are expected to become more widely dispersed under this ridge.

Expect air quality impacts ranging from [MODERATE](#) to [UNHEALTHY FOR SENSITIVE GROUPS](#) in Montana today. Smoke impacts in the Bitterroot Valley will likely vary significantly over a short distance and may change rapidly tomorrow when winds increase.

#### Today's Summary

**An Air Quality Alert has been issued for Ravalli County until further notice due to the Roaring Lion Fire in Hamilton, MT. Air quality has degraded throughout the day and has reached Unhealthy levels as of 4pm. This alert will be updated again at 900AM on 8/2/2016.**

**An Air Quality Alert means that particulates have been trending upwards and that an exceedance of the 24 hour National Ambient Air Quality Standard (NAAQS) has occurred or may occur in the near future.**

#### Particulate levels in Hamilton are Unhealthy

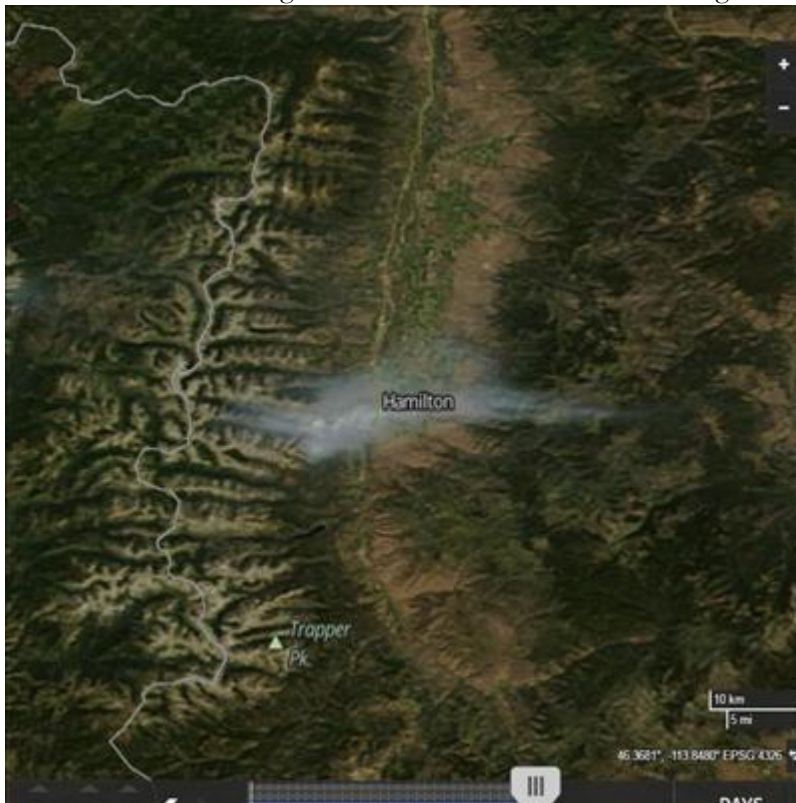
**When air quality is Unhealthy... State and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

Air quality has been degrading in Hamilton throughout the day, reaching unhealthy levels by 4pm.



Source: [KTVQ](#)

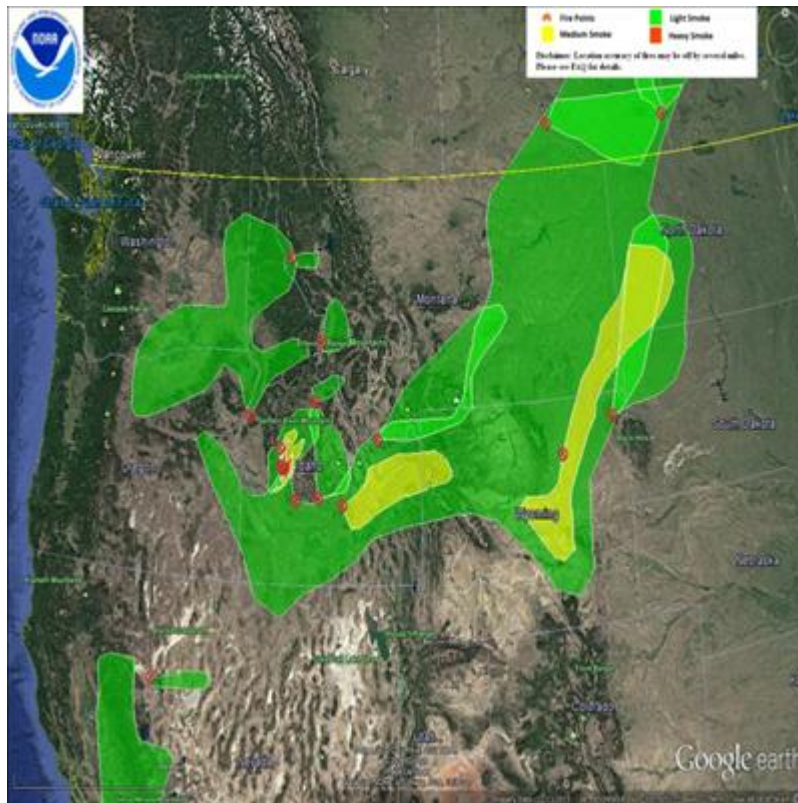
Smoke from the Roaring Lion fire can be seen on satellite imager this afternoon.



Source: [NASA](#)



Light smoke across eastern Montana today while smoke continues to impact the Bitterroot Valley this afternoon.



Source: [NOAA](https://www.noaa.gov/)

In Missoula, haze from the fire can be seen this afternoon, but air quality remains good.



Source: [KTVQ](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Hamilton
<a href="#">Unhealthy for Sensitive Groups</a>	
<a href="#">Moderate</a>	Butte Dillon West Yellowstone
<a href="#">Good</a>	All other reporting locations.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1800Z August 1, 2016  
SMOKE:

Western US/Northern and Central High Plains:

A large area of light density smoke could be seen moving generally eastward through the region. Small pockets of moderate density smoke was seen in portions of the region with high density smoke centered close to the large active fires. Little downwind dispersion of the higher density smoke was observed with high density smoke trapped in valley locations in the northern Rockies.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2016/2016H011811.html>

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AUGUST 2, 2016

**PM2.5 Location(s):** Hamilton

**Synopsis:** The Roaring Lion Fire, located near Hamilton, MT burned through over 3,000 acres in just a few hours on August 1, 2016. This fire caused smoke impacts in Hamilton throughout the first week of August.

**Documentation:**

*Wildfire Smoke Update for Tuesday, August 2, 2016 9:50 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=1071>

**Today's Report and Forecast**

Air quality degraded significantly in Hamilton during the overnight period, reaching [HAZARDOUS](#) levels briefly before recovering this morning. Cumulative 24 hour air quality is currently [VERY UNHEALTHY](#) while the NowCast concentration is [UNHEALTHY FOR SENSITIVE GROUPS](#) due to improved conditions the past two hours. Elsewhere, air quality is [UNHEALTHY FOR SENSITIVE GROUPS](#) in West Yellowstone and ranging between [GOOD](#) and [MODERATE](#) in Libby and Dillon.

Fire activity continues to increase in and around the state today. Here is a rundown of the current fires impacting the state:

- The Roaring Lion Fire in Hamilton is currently 3,655 acres and 0% contained with active fire behavior.
- The Copper King fire east of Thompson Falls is still being reported at 700 acres with 0% contained and active fire behavior
- The North Tullock fire near Custer is currently 1,500 acres and 0% contained with active fire behavior.
- The Cedar fire on the Idaho side of the Bitterroot Mountains is currently 1,371 acres and 0% contained with moderate fire behavior.
- The Pioneer fire near Boise is currently 38,072 acres with 28% contained and extreme fire behavior
- The Range 12 fire in Washington is currently 175,000 acres and 10% contained with active fire behavior.
- The Rail fire in eastern Oregon is currently 900 acres with 0% contained and moderate fire behavior.

Volatile fire behavior is expected today as a cold front and associated low pressure center swing through the state later this afternoon. A tight pressure gradient will create high winds over the area and unfortunately, little to no precipitation is expected. This has prompted the National Weather Service to issue red flag warnings in western and southern Montana, as well as parts of Washington, Oregon, Idaho, and Wyoming.

Air quality in Hamilton will likely vary wildly throughout the day, depending on fire behavior. As we have seen the past two days, during the most active times of the fire, the smoke is lifting up and over the valley, with air quality reaching [GOOD](#) to [MODERATE](#) levels in Hamilton. When the sun goes down, the temperatures cool, and the most extreme fire behavior calms down, smoke settles into the valley, and can reach [HAZARDOUS](#) levels like it did last night.

Transport wind will be from the southwest, with large plumes expected off existing fires. Most of this smoke will likely stay above the ground level, with air quality remaining [GOOD](#) to [MODERATE](#) in most areas. Air quality may deteriorate this evening as transported smoke settles down to the ground level.

After this system passes through, fire activity may decrease due to calmer winds and cooler temperatures on Wednesday. Unfortunately, a ridge of high pressure is expected for the end of the week, bringing a return to hot and dry weather. Smoke impacts will likely become more widely dispersed across the state under this ridge.

#### **Today's Summary**

**An Air Quality Alert has been issued for Ravalli County until further notice due to the Roaring Lion Fire in Hamilton, MT. The high winds expected over the fire may cause air quality to vary greatly over short distances and time and may reach hazardous levels. This alert will be updated again at 900AM on 8/3/2016.**

**An Air Quality Alert means that particulates have been trending upwards and that an exceedance of the 24 hour National Ambient Air Quality Standard (NAAQS) has occurred or may occur in the near future.**

#### **Particulate levels in Hamilton are Very Unhealthy**

**When air quality is Hazardous... State and local health officials recommend that everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should remain indoors.**

**When air quality is Very Unhealthy... State and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.**

**When air quality is Unhealthy... State and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

Smoke has been clearing from Hamilton this morning but has yet to lift out of the valley.



Source: [KPAX](#)



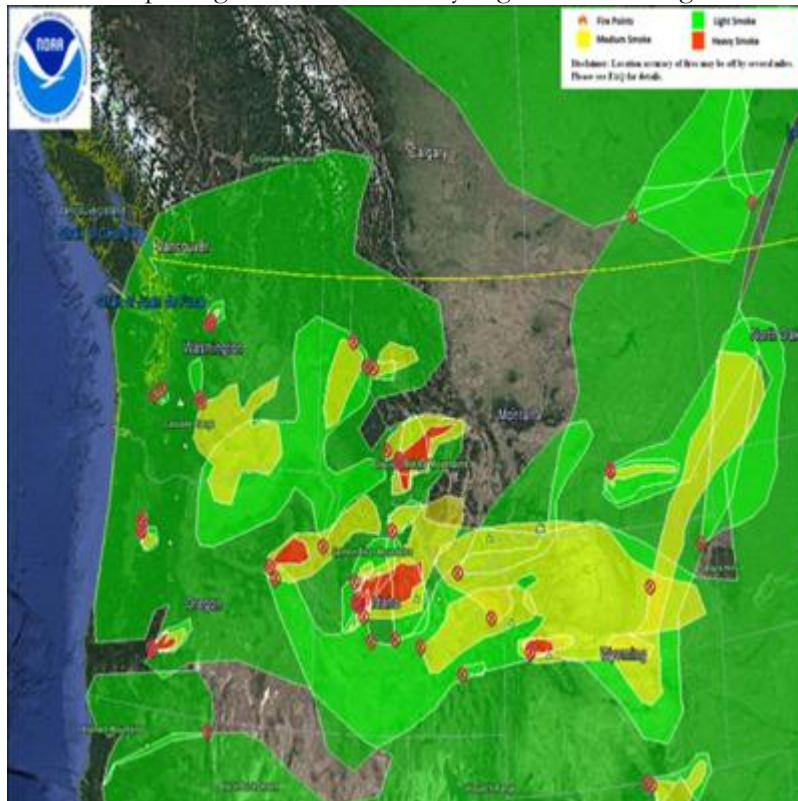


Fire activity continues to increase across the region today.



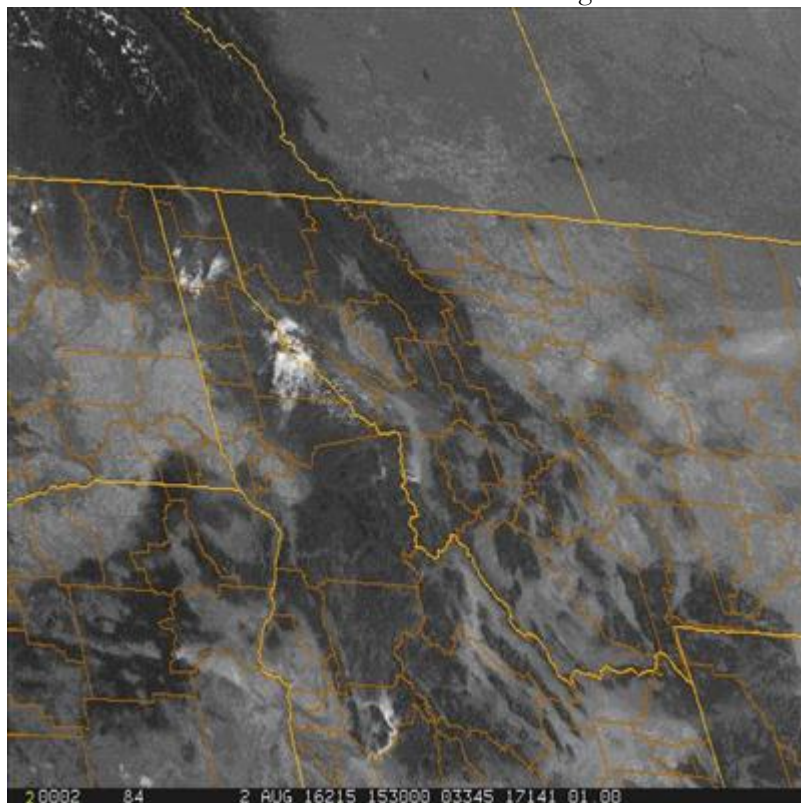
Source: [USFS](https://www.usfs.gov/)

Smoke is impacting the state from many angles this morning.









Source: [NOAA](https://www.noaa.gov/)

Smoke can be seen in the Bitterroot as well as Oregon and Idaho this morning on satellite imagery.



Source: [NOAA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
 <a href="#">Hazardous</a>	
 <a href="#">Very Unhealthy</a>	Hamilton (hourly conditions are USG)
 <a href="#">Unhealthy</a>	
 <a href="#">Unhealthy for Sensitive Groups</a>	West Yellowstone
 <a href="#">Moderate</a>	
 <a href="#">Good</a>	All other reporting locations.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1900Z August 2, 2016

SMOKE:

Western US/Northern Plains:

A large area of light density smoke with embedded areas of moderately dense/dense smoke could be seen moving generally eastward through the region stretching as far as the Great Lakes region. The larger pockets of moderately dense smoke were present over the western Dakotas, Montana, northern Idaho, and central California. Most of this smoke is from western US wildfires though there is an area of thin remnant smoke moving across the Oregon/Washington coast and over the Pacific Northwest states that is believed to be Asian smoke.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2016/2016H021908.html>

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AUGUST 5, 2016

**PM2.5 Location(s):** Hamilton

**Synopsis:** The Roaring Lion Fire, located near Hamilton, MT burned through over 3,000 acres in just a few hours on August 1, 2016. This fire caused smoke impacts in Hamilton throughout the first week of August.

**Documentation:**

***Wildfire Smoke Update for Friday, August 5, 2016 11:31 AM***

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=1073>

**Today's Report and Forecast**

Air quality is GOOD in many locations this morning. The Roaring Lion fire sent smoke into Hamilton overnight, reaching UNHEALTHY levels earlier this morning. Fire activity decreased on the Roaring Lion fire on Thursday. Decreased fire activity means smoke from the fire does not lift as well. This caused smoke to settle into the valley overnight. Concentrations have decreased this morning, with hourly NowCast levels decreasing to MODERATE the past two hours. Elsewhere, air quality is MODERATE in Broadus and Birney due to widespread light smoke over eastern Montana. Air quality is GOOD in all other reporting locations.

Here is a summary of fires impacting Montana today:

- The Roaring Lion fire in Hamilton is 7,753 acres and 15% contained with moderate fire behavior
- The Copper King fire near Thompson Falls is 1,286 acres and 0% contained with moderate fire behavior.
- The Butte fire near Forsyth is 617 acres and 20% contained with moderate fire behavior.
- The Blue Lake fire near Ennis remains at 629 acres and 44% contained with moderate fire behavior.
- The Cedar fire in the Selway-Bitterroot Wilderness is 1,371 acres and is under a long-term management plan due to its remote location.
- The Roaring fire in the Salmon-Challis National Forest is 1,500 acres and 0% contained with active fire behavior.
- The Pioneer fire near Boise is 50,478 acres and 27% contained with active fire behavior.

Smoke is expected to continue to lift out of the Bitterroot Valley throughout the day. However, the ridge of high pressure that is over Montana will cause smoke to spread out today, leading to hazy skies in many locations. Scattered showers and thunderstorms are possible this evening, potential bringing a period of erratic weather to active fires in western Montana. Beginning Saturday, Montana will remain under southwest flow aloft due to a low pressure center moving over Washington State. This system will stall out over Washington through the beginning of next week, decreasing fire danger to our west. The position of this system will bring moist southwest flow into Montana, increasing the risk of afternoon thunderstorms each day. Fire danger will remain high due to risk of gusty winds and lightning. The low pressure center is forecasted to move to the east during the latter half of next week. The path this low pressure center takes will determine if Montana gets a good soaking of rain or just scattered showers and thunderstorms at the end of next week.

Expect hazy skies and smoke impacts to continue in many locations throughout the weekend with

intermittent improvement if thunderstorms pass through. Smoke impacts in Hamilton will likely continue the pattern of deteriorating overnight and improving during the day, although increased winds may keep more smoke off the valley floor in the coming days. Smoke impacts in Hamilton could reach [UNHEALTHY](#) levels at times, while air quality is expected to remain [GOOD](#) to [MODERATE](#) elsewhere.

#### Today's Summary

Air quality is [GOOD](#) to [MODERATE](#) in many locations this morning. Smoke settled into the Bitterroot Valley last night, leading to [UNHEALTHY](#) impacts early this morning. Conditions have improved as daytime heating has helped lift smoke out of the valley. More active weather is expected starting this afternoon and lasting through the middle of next week. Afternoon thunderstorms are likely, which will lead to high fire danger and erratic smoke impacts near active fires due to the gusty winds. It is too soon to say, but the end of next week could bring widespread rain to the state, helping to mitigate the increasing fire danger.

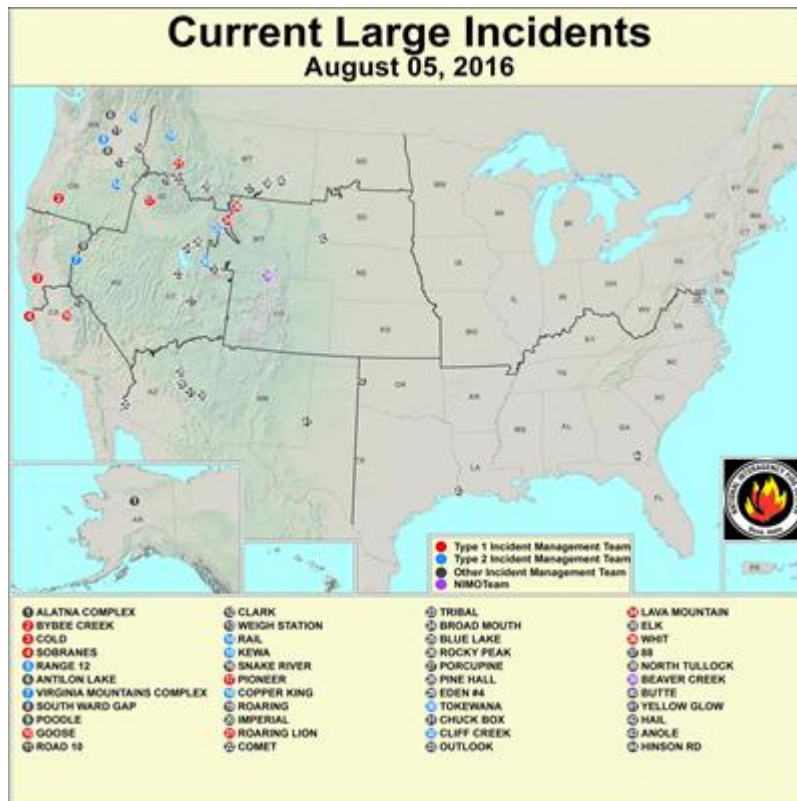
Smoke is lifting out of Hamilton this morning.



Source: [KPAX](#)

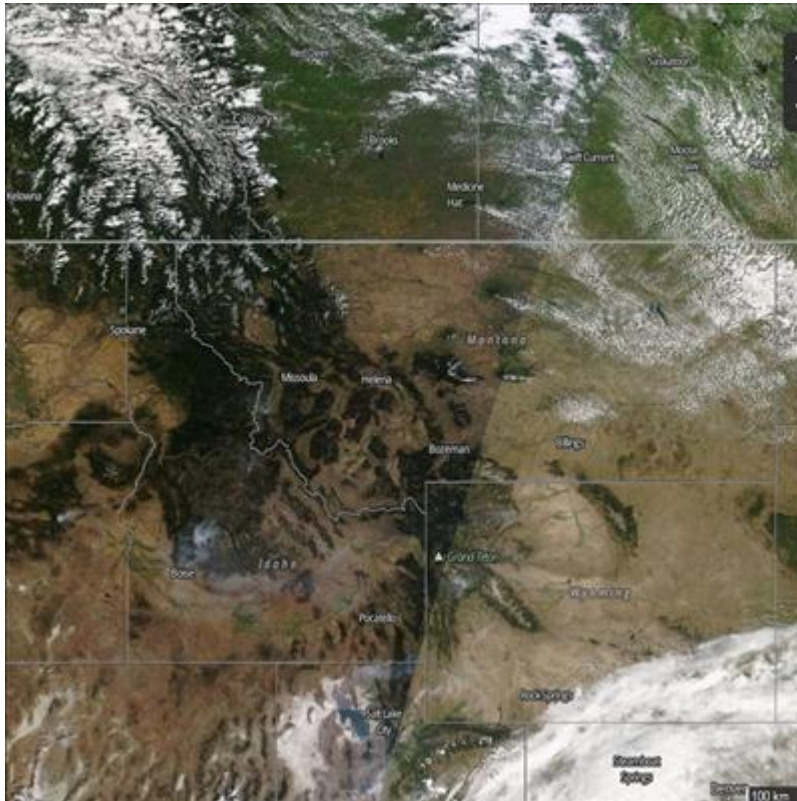


Current active fire behavior is shown below.



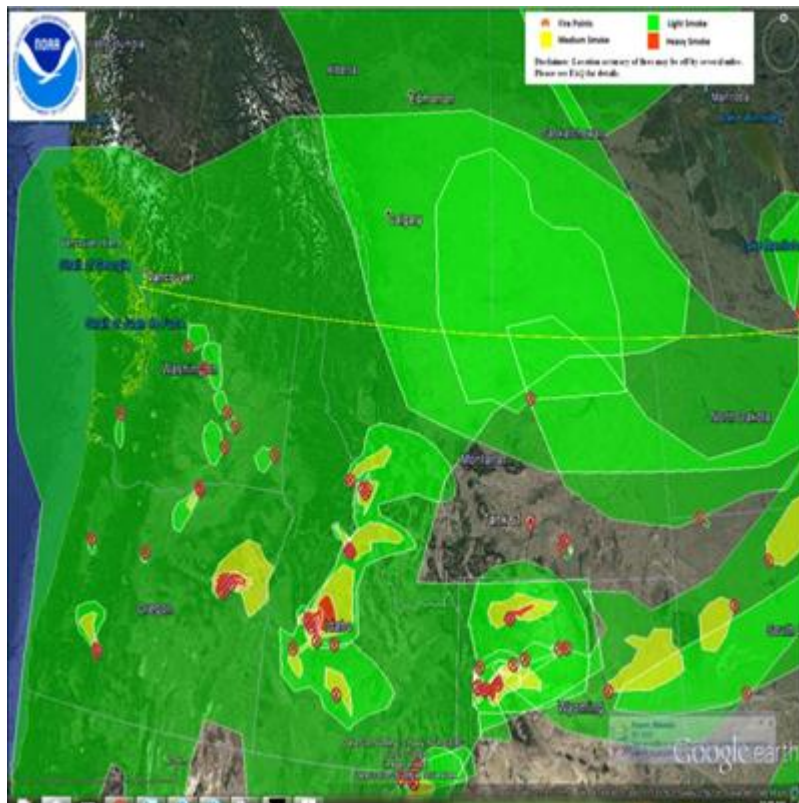
Source: [USFS](https://www.usfs.gov/)

Smoke can be seen from numerous fires in and around Montana on satellite imagery yesterday.



Source: [NASA](#)

Widespread light smoke was detected on the satellite smoke analysis yesterday, with distinct plumes off active fires.



Source: [NOAA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories		City
<a href="#">Hazardous</a>		
<a href="#">Very Unhealthy</a>		
<a href="#">Unhealthy</a>		
<a href="#">Unhealthy for Sensitive Groups</a>		
<a href="#">Moderate</a>		Hamilton (concentrations were unhealthy earlier today) Broadus Birney
<a href="#">Good</a>		All other reporting locations.



## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1900Z August 5, 2016

### SMOKE:

Western US/Central Plains/Northern Plains/Western Canada:

An area of light density smoke was seen across the region moving generally eastward. This smoke was likely originating from large active wildfires burning across the western United States. Areas of moderate density smoke was confined to the larger wildfires burning across the area.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2016/2016H051908.html>

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AUGUST 6, 2016

**PM2.5 Location(s):** Hamilton

**Synopsis:** The Roaring Lion Fire, located near Hamilton, MT burned through over 3,000 acres in just a few hours on August 1, 2016. This fire caused smoke impacts in Hamilton throughout the first week of August.

### Documentation:

*Wildfire Smoke Update for Saturday, August 6, 2016 11:42 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=1074>

### Today's Report and Forecast

Air quality in Hamilton followed a familiar pattern over the last 12 hours. As fire activity died down overnight, smoke settled into the valley, reaching [UNHEALTHY](#) levels early this morning. Concentrations have decreased this morning, with the [NowCast](#) reaching [MODERATE](#) levels the past two hours. Elsewhere, air quality continues to oscillate between [GOOD](#) and [MODERATE](#) levels. Skies are cloudy around western Montana today, as moist southwest flow moves into the region. This will slow daytime heating and may cause smoke to linger in the Bitterroot Valley a little longer.

Fire active remains active in and around Montana. Here is a rundown of current fires impacting the state.

-The Roaring Lion fire near Hamilton is 7,927 acres and 20% contained with moderate fire behavior.

-The Copper King fire near Thompson Falls is 1,286 acres and 0% contained with moderate fire behavior.

-The Blue Lake fire near Ennis is 750 acres and 60% contained with minimal fire behavior.

-The Pioneer fire near Boise, ID continues its rapid growth and is now 51,903 acres and 20% contained with extreme fire behavior. With the southwest flow moving over the region, this fire is likely to cause more smoke impacts in Montana in the coming days.

As a low pressure center moves over Washington State today, Montana will come under increasingly unstable southwest flow. A steady supply of moisture will help launch thunderstorms across Montana today. These storms will create erratic fire behavior on existing fires due to gusty winds, while the threat of lightning keeps new fire danger high. This has prompted a red flag warning over southwest Montana. Fortunately, the influx of moist air means we could see solid precipitation associated with some of these storms, helping to mitigate fire behavior in places.

This pattern will continue each day through mid-week as the low pressure center creeps along across Washington to northern Montana by mid-week. By Wednesday, we may see cool temperatures and showery conditions, especially in the northern half of the state. This should give us a reprieve from the extreme fire behavior we have seen for the past week.

Expect air quality to range from [GOOD](#) to [MODERATE](#) in most locations today, with improvement in



many areas as thunderstorms move through. Smoke impacts in Hamilton will likely follow the same pattern we have seen the past three days, with the worst impacts overnight when fire activity slows. If significant precipitation falls on the fire, we may see a longer period of improvement as particulates are removed from the air and fire activity slows down.

#### **Today's Summary**

Air quality is [GOOD](#) to [MODERATE](#) in many locations this morning as more unsettled weather moves into the area. Air quality in Hamilton continues its daily oscillation of [UNHEALTHY](#) air quality at night and [MODERATE](#) impacts during the day due to the smoke settling into the valley at night. Thunderstorms are likely across the region each day, increasing the chance of both much needed rain, and erratic fire behavior due to gusty winds. Air quality is expected to remain between [GOOD](#) and [MODERATE](#) in most locations with more significant impacts possible overnight in the Bitterroot Valley.

Cloudy conditions may keep smoke hovering around the Bitterroot Valley today, but conditions have improved since early this morning.



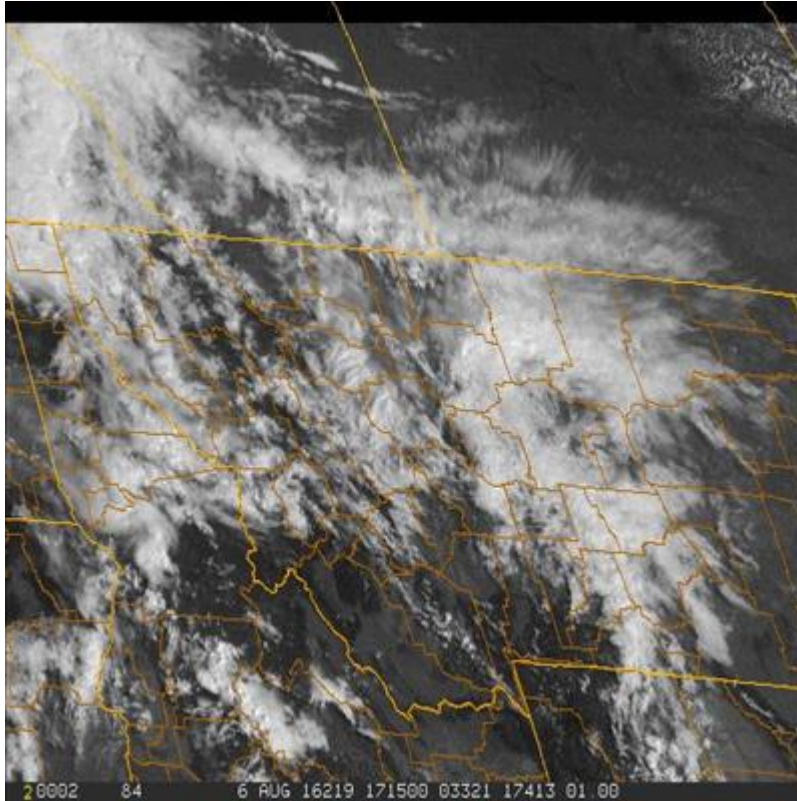
Source: [KPAX](#)

Current large fire locations are shown below.



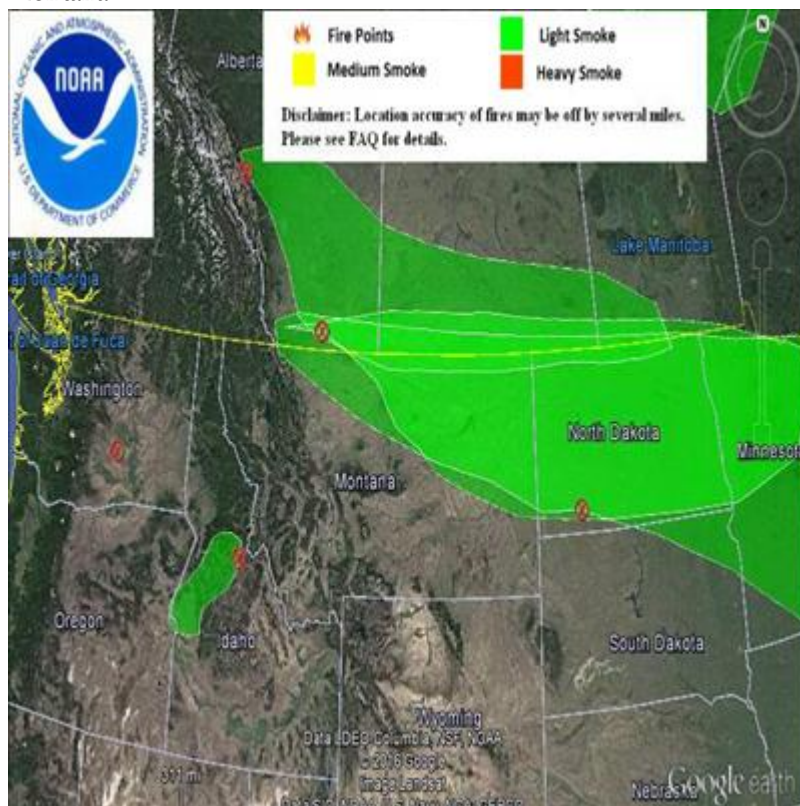
Source: [USFS](https://www.usfs.gov/)

There is widespread cloud cover today as unsettled weather moves across the state.



Source: [NOAA](https://www.noaa.gov/)

The satellite smoke analysis from this morning cannot pick up smoke under the cloud cover in western Montana.



Source: [NOAA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Hamilton (24 hour average - hourly conditions have improved)
<a href="#">Unhealthy for Sensitive Groups</a>	
<a href="#">Moderate</a>	Seeley Lake Bozeman
<a href="#">Good</a>	All other reporting sites

## NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1700Z August 6, 2016

### SMOKE:

Western US/Northern Plains/Northern Mississippi Valley/Southern Canada:

An area of remnant thin smoke from active wildfires across the western US was moving across parts of southern British Columbia, Saskatchewan, and Manitoba. In the US, smoke is seen over northern/eastern Montana, North Dakota, northeast South Dakota, Minnesota, northeast Iowa and Wisconsin. Cloud cover across Idaho and western Montana obscures the full view of smoke in the region. A small patch between the clouds is seen in central Idaho.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2016/2016H061726.html>

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AUGUST 22, 2016

**PM2.5 Location(s):** Hamilton

**Synopsis:** A handful of fires in the Selway-Bitterroot sent smoke in to Hamilton beginning at 6pm. The Moose Fire, located 25 miles to the west of Hamilton looks to be the largest contributor of smoke.

### Documentation:

*Wildfire Smoke Update for Monday, August 22, 2016 10:18 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=1086>

### Today's Report and Forecast

Increased fire activity has sent a large amount of smoke across Montana this morning. Our air quality monitors are reporting widespread **MODERATE** impacts across the region, including in Frenchtown, Missoula, Seeley Lake, Helena, Butte, Dillon, Bozeman, Great Falls, and Lewistown. Libby is currently reporting air quality at the **UNHEALTHY FOR SENSITIVE GROUPS** level. The monitor in West Yellowstone remains down, although air quality impacts are likely in this area. That monitor should be up and running again later today.

The gusty winds that moved into the area last night created much more active fire behavior than we have seen in recent days. Here in Montana, the Copper King fire near Thompson falls grew to 6,400 acres with extreme fire behavior. This isn't the only fire showing rapid growth under the red flag conditions. The Pioneer fire near Boise is now 96,469 acres, which is an almost 10,000 acre increase since yesterday's report. The Cherry Road fire in Oregon started Sunday afternoon and has already reached 30,000 acres this morning. Fire detection maps are also showing increased activity in eastern Washington, although no other information is available at this time. The Moose and Cedar fires west of the Bitterroot Valley in Idaho are also contributing to the increased smoke. Lastly, the Tatanka Complex fires in Yellowstone National Park are currently 19,552 acres with active fire behavior.

**In summary, fire activity has increased significantly due to gusty winds over Oregon, Idaho, Wyoming, and Montana. This increased activity sent widespread smoke across Montana overnight and some of that smoke is mixing to the ground level due to the stable atmosphere.**

A change in weather pattern is expected over the next 24 hours as a low pressure center is expected to swing through southern Canada. A tight pressure gradient is expected to bring gusty winds to the area this afternoon, setting off red flag warnings across western Montana, Idaho, and Wyoming. This will likely continue a period of extreme fire activity over active fires and rapid growth on any new fires. Winds will be from the west this afternoon, likely keeping smoke in our area from fires here in Montana, northern Idaho, and Washington. Smoke from the Pioneer fire and those in West Yellowstone should stay mainly to our



south starting later today. As the low moves further east, winds aloft will shift to the north and northwest. This should redirect smoke from out-of-state fires away from Montana by Tuesday afternoon. The northerly flow should also bring cooler temperatures on Tuesday, hopefully mitigating some of the most extreme fire behavior. Light winds are expected for the latter half of the week, with transport winds shifting to the northeast. This should continue to keep transported smoke out of Montana.

Expect air quality to range from [MODERATE](#) to [UNHEALTHY FOR SENSITIVE GROUPS](#) in many locations today. Conditions should improve in most areas starting tomorrow as smoke is pushed out of the state. Air quality impacts near active fires may range from [UNHEALTHY FOR SENSITIVE GROUPS](#) to [VERY UNHEALTHY](#) at times and will likely persist through tomorrow.

### **Today's Summary**

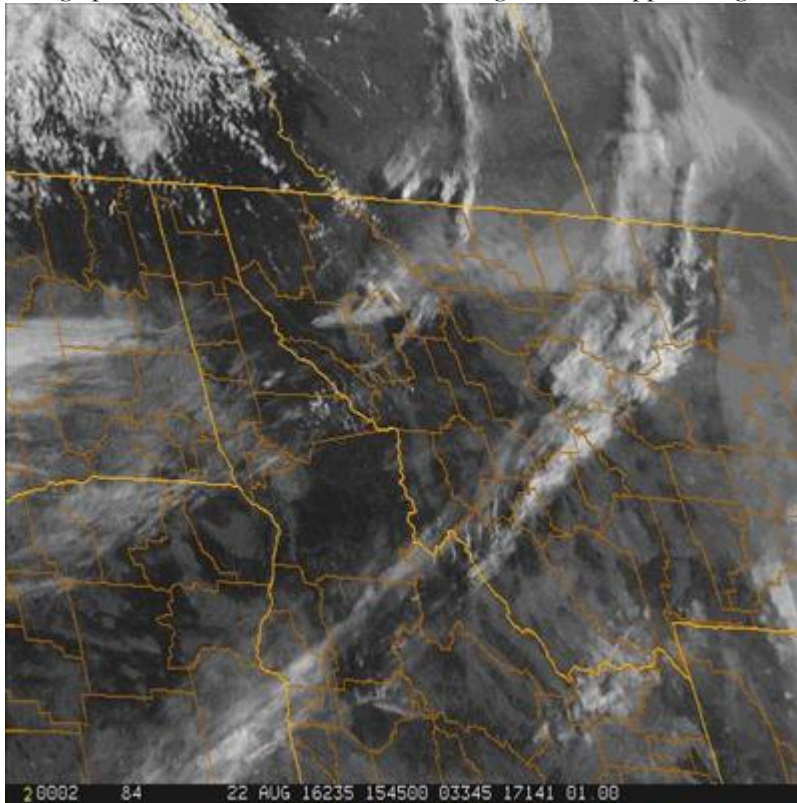
Hazy skies and [MODERATE](#) to [UNHEALTHY FOR SENSITIVE GROUPS](#) impacts are widespread this morning as a significant increase in fire activity yesterday sent large amounts of smoke into Montana. Smoke impacts are likely to continue throughout the day as red flag warnings will likely keep fire activity very high. A wind shift tomorrow should help clear the air in most locations, with localized impacts near active fires still likely.

The webcam in Polson is showing a plume of smoke from the Copper King fire moving over the Flathead Valley.



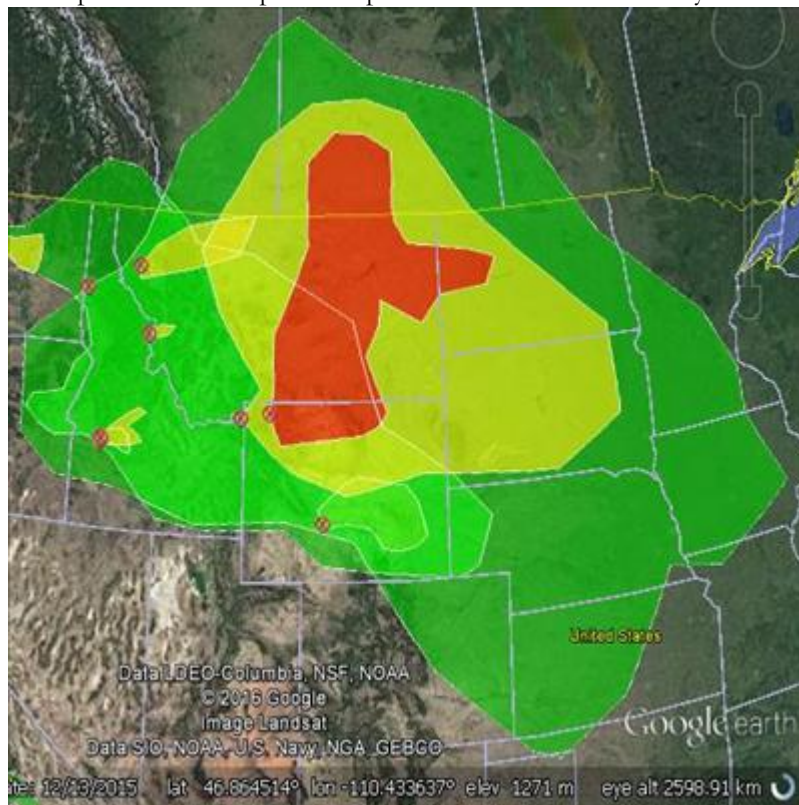
Source: [Polson RV Resort](#)

A large plume of smoke can be seen coming off the Copper King fire near Thompson Falls.



Source: [NOAA](#)

Widespread smoke impacts are present across Montana today.



Source: [NOAA](#)

Large fire locations are shown below



Source: [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	
<a href="#">Unhealthy for Sensitive Groups</a>	Libby
<a href="#">Moderate</a>	Frenchtown Missoula Seeley Lake Helena Butte Dillon Bozeman Lewistown Great Falls
<a href="#">Good</a>	All other reporting locations

*Wildfire Smoke Update for Monday, August 22, 2016 2:16 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=1087>

**Today's Report and Forecast**

Afternoon Update:

**An Air Quality Alert** has been issued for Blaine, Glacier, Hill, Liberty, and Toole Counties in effect until 900AM on 8/23/16 due to a large plume of smoke coming off the Copper King fire near Thompson Falls is causing unhealthy air quality. Conditions are expected to improve on Tuesday. This alert will be updated again at 900AM on 8/23/2016 if conditions warrant.

**An Air Quality Alert** means that particulates have been trending upwards and that an exceedence of the 24 hour National Ambient Air Quality Standard (NAAQS) has occurred or may occur in the near future.

**Particulate levels based on visibility in Havre are Unhealthy**

**When air quality is Unhealthy...** State and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

The extreme fire behavior is continuing on the Copper King fire today with a large plume of smoke impacting the Hi-line this afternoon. Visibility at the Havre airport has ranged from 2-4 miles the past few hours, indicating UNHEALTHY air quality. Decreased visibility is also being reported in Cut Bank the past few hours. Southwest winds are expected to persist for the rest of the afternoon in these areas. We should start to see improvement throughout the day on Tuesday, when winds shift and smoke from this fire is carried to the southeast.

Elsewhere air quality remains MODERATE due to widespread smoke from numerous fires to our south and west.

See today's original discussion [here](#).

**Today's Summary**

**An Air Quality Alert** has been issued for Blaine, Glacier, Hill, Liberty, and Toole Counties in effect until 900AM on 8/23/16 due to a large plume of smoke coming off the Copper King fire near Thompson Falls is causing unhealthy air quality. Conditions are expected to improve on Tuesday. This alert will be updated again at 900AM on 8/23/2016 if conditions warrant.

**An Air Quality Alert** means that particulates have been trending upwards and that an exceedence of the 24 hour National Ambient Air Quality Standard (NAAQS) has occurred or may occur in the near future.

**Particulate levels based on visibility in Havre are Unhealthy**

**When air quality is Unhealthy...** State and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

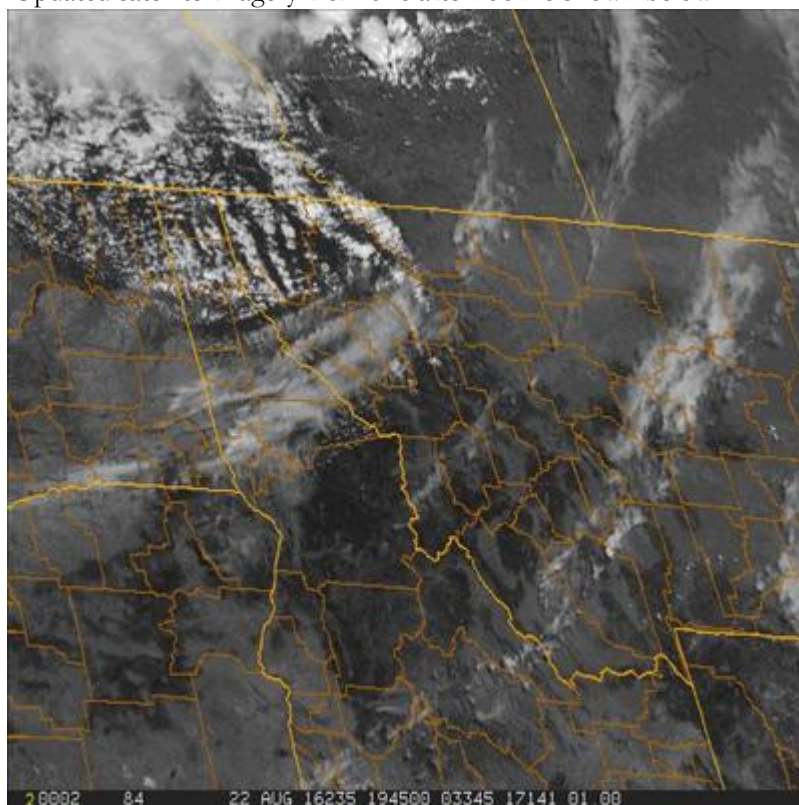


The webcam in Cut Bank shows smoky skies this afternoon.



Source: [Glacier Electric](#)

Updated satellite imagery from this afternoon is shown below.



Source: [NOAA](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	Havre (based on visibility)
<a href="#">Unhealthy for Sensitive Groups</a>	
<a href="#">Moderate</a>	Flathead Valley Frenchtown Missoula Hamilton Dillon Helena Lewistown Bozeman Billings
<a href="#">Good</a>	All other reporting locations.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1730Z August 22, 2016

SMOKE:

Northwestern to the central United States:

An area of light density smoke was seen extending from the Pacific Northwest eastward all the way to Iowa. The area also extends north into southern Alberta/Saskatchewan and southwest Manitoba and as far south as western Oklahoma. Moderate density smoke extended eastward from central Idaho to the Dakotas and as far north as southern Alberta/Saskatchewan. The heaviest density smoke was confined to northern Wyoming/central Montana/southern Saskatchewan and into North Dakota. Cloud cover obscured the full extent of smoke coverage.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2016/2016H221733.html>

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AUGUST 28, 2016

**PM2.5 Location(s):** Hamilton

**Synopsis:** A handful of fires in the Selway-Bitterroot sent smoke in to Hamilton beginning at about 4pm. The smoke began to clear around 3am the following morning.

**Documentation:**

*Wildfire Smoke Update for Sunday, August 28, 2016 2:42 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=1094>

**Today's Report and Forecast**

An Air Quality Alert has been issued for Gallatin County in effect until further notice due to nearby wildfire activity. Significant air quality impacts are expected in the southern portion of Gallatin County near Yellowstone National Park. This alert will be updated again at 900AM on August 29,

2016.

**An Air Quality Alert means that particulates have been trending upwards and that an exceedance of the 24 hour National Ambient Air Quality Standard (NAAQS) has occurred or may occur in the near future.**

### **Particulate levels in West Yellowstone are Unhealthy**

**When air quality is Unhealthy... State and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.**

Air quality has shown some wider spread deterioration since yesterday. The Air Quality Alert is maintained in Gallatin County due to the impacts seen at the West Yellowstone monitor. West Yellowstone is currently reporting [UNHEALTHY](#). Thompson Falls has seen significant improvement since yesterday's morning peak; the alert has been lifted, and the monitor is currently reporting [GOOD](#). Helena saw elevated concentrations overnight and is currently reporting cumulative [UNHEALTHY FOR SENSITIVE GROUPS](#). Dillon is also showing cumulative [UNHEALTHY FOR SENSITIVE GROUPS](#) due to concentrations steadily climbing since early this morning. Southwest Montana has been victim of transport smoke which looks to be primarily from the Idaho fires to its west. Helena saw some nighttime settling of smoke likely from fires in the Selway-Bitterroot, but this morning's sun seems to have helped lift any smoke to above ground level.

- The Copper King fire near Thompson Falls is 24,017 acres and 15% contained with moderate fire behavior.
- The Maple fire near West Yellowstone is 31,029 acres and 0% contained with moderate fire behavior.
- The Pioneer fire near Boise, ID is currently 105,475 acres and 58% contained with active fire behavior.

Weather today is not much different than yesterday. Widespread impacts are expected to continue as the favorable conditions persist for smoke transport. Conditions will likely improve some as the day goes on as smoke will have a tougher time reaching ground level with the rising warm air against it. Tonight and into early next morning, expect the most significant impacts due to transported smoke settling down to ground level. As the day goes on, smoke will also make its way further east and may start affecting more locations in Eastern Montana. The addition of smoke sources likely to contribute also increases as you go east.

Expect impacts to reach (or maintain) [MODERATE](#) to [UNHEALTHY](#) in southwest Montana into tonight and tomorrow morning. In other places more to the east, expect [MODERATE](#) to [UNHEALTHY FOR SENSITIVE GROUPS](#) impacts as smoke makes its way across the state, and in addition more smoke contributions from the Yellowstone fires affect the area.

Beginning tomorrow, high pressure will be building and warmer temperatures are expected. A warm southwest wind may be helpful for dispersion but the risk of thunderstorms and new fires are also possibilities early this week.

### **Today's Summary**

Air quality is [GOOD](#) to [MODERATE](#) at most locations this morning. West Yellowstone remains [UNHEALTHY](#) due to the nearby fires in Yellowstone National Park. The change in weather yesterday has relieved Thompson Falls, but it also has created conditions that allowed smoke transport from fires to our west; Helena was affected last night, and today smoke has crept up the Beaverhead and into Southwest Montana, with Dillon's monitor reporting some elevated concentrations this morning. Conditions should improve at most locations away from active fires as the day goes on, but will likely worsen some again by the time we reach early hours tomorrow morning.

Hazy skies can be seen in Ennis this afternoon.



Source: [Weather Underground](#)

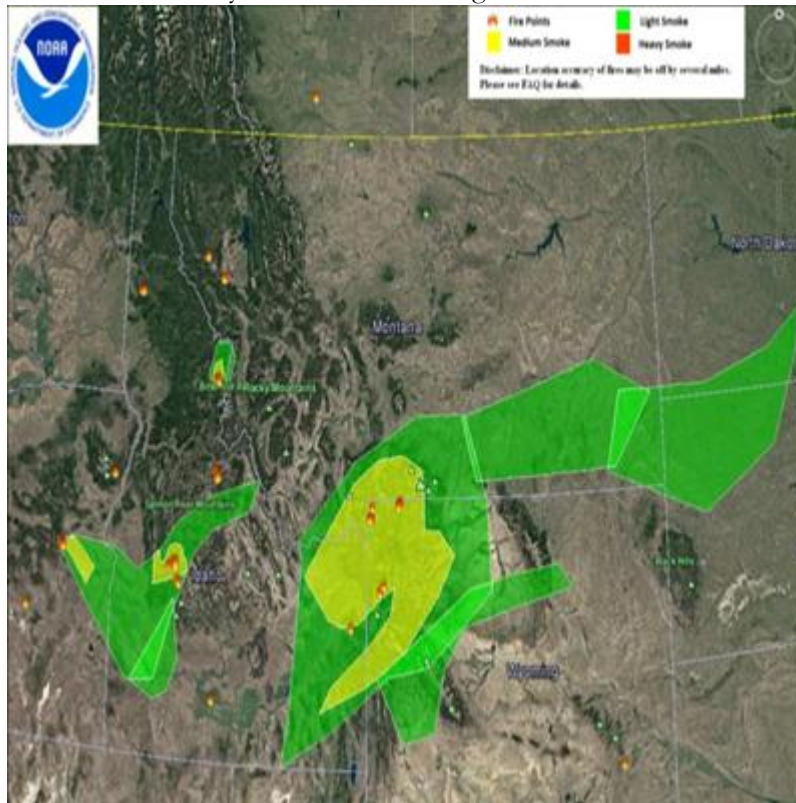
Some haze may be detectable in southwest Montana yesterday...



Source: [NASA](#)



Satellite smoke analysis from this morning.



Source: [NOAA](https://www.noaa.gov/)



Current large active fires.



Source [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	
<a href="#">Unhealthy</a>	West Yellowstone
<a href="#">Unhealthy for Sensitive Groups</a>	
<a href="#">Moderate</a>	Bozeman
<a href="#">Good</a>	All other reporting locations.

### *Wildfire Smoke Update for Monday, August 29, 2016 2:16 PM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=1095>

### Today's Report and Forecast

An Air Quality Alert has been issued for Gallatin County and Sanders County in effect until further notice due to nearby wildfire activity. Significant air quality impacts are expected in the southern portion of Gallatin County near Yellowstone National Park. Significant air quality impacts are seen in Thompson Falls due to recent nearby fire activity and favorable conditions. This alert will be

updated again at 900AM on August 30, 2016.

**An Air Quality Alert means that particulates have been trending upwards and that an exceedance of the 24 hour National Ambient Air Quality Standard (NAAQS) has occurred or may occur in the near future.**

**Particulate levels in West Yellowstone are Very Unhealthy**

**Particulate levels in Thompson Falls are Very Unhealthy**

**When air quality is Very Unhealthy... State and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.**

Air quality trends have been similar to yesterday in that more locations have experienced haze and ground-level impacts. The Air Quality Alert is maintained in Gallatin County due to the impacts seen at the West Yellowstone monitor. We saw a large spike during the 7:00-8:00AM hour this morning, likely due to stagnant air and the accumulation of smoke from the fires in the park. West Yellowstone is currently reporting [VERY UNHEALTHY](#). Concentrations in Thompson Falls have recently started climbing, and has pushed the monitor into the [VERY UNHEALTHY](#) category as of the 10-11AM hour, and has continued to climb, prompting an Air Quality Alert. This is attributed to nearby fire activity from the Copper King fire and favorable conditions for smoke to drain down the valley. Hamilton saw elevated concentrations overnight which pushed it into [VERY UNHEALTHY](#), but is currently reporting [UNHEALTHY](#) from cumulative 24-hour exposures. This looks to be a result of a light south-southwest wind before midnight last night. Butte has climbed to [UNHEALTHY FOR SENSITIVE GROUPS](#) levels by late this morning as well, and looks to be in line with smoke transported from central Idaho fires.

- The Copper King fire near Thompson Falls is 24,017 acres and 15% contained with active fire behavior.
- The Maple fire near West Yellowstone is 31,404 acres and 0% contained with moderate fire behavior.
- The Pioneer fire near Boise, ID is currently 109,594 acres and 55% contained with active fire behavior.

Weather today is forecasted to be warmer with the building ridge creating a dominant southwest wind aloft. This warmer weather seems to have prompted increased fire activity which has caused more smoke impacts around the state. Widespread impacts are expected to continue as the favorable conditions continue for fire activity and smoke transport.

Expect impacts to reach (or maintain) [MODERATE](#) to [UNHEALTHY](#) in southwest Montana into tonight and tomorrow morning, as smoke gets pushed from central Idaho fires. Hamilton and the Missoula valley project to see smoke coming from the Selway-Bitterroot fires, and could maintain [MODERATE](#) to [UNHEALTHY](#) levels. West Yellowstone may improve some, but still could maintain [UNHEALTHY](#) levels through the day from the fires in the park. Thompson Falls is seeing impacts from local fire activity and may stay [UNHEALTHY](#) or worse. Northwest Montana is more clear of smoke transport but still could see impacts from the Copper King fire as well if a stronger southwest wind picks up, and may be [MODERATE](#) to USG. In other places more to the east, expect [MODERATE](#) to [UNHEALTHY FOR SENSITIVE GROUPS](#) as smoke makes its way across the state.

Similar weather conditions are forecasted for tomorrow, which should not bring significant changes we are seeing today, unless we add new fire activity to the list of smoke sources.

### Today's Summary

Air quality is [GOOD](#) to [MODERATE](#) at most locations this morning. West Yellowstone is at [VERY UNHEALTHY](#) due to the nearby fires in Yellowstone National Park. Thompson Falls is being impacted again by the Copper King fire and is reporting [VERY UNHEALTHY](#) and prompted an Air Quality Alert. Southwest Montana, Hamilton, and the Missoula valley will likely see impacts being downwind of active fires in Idaho. All other locations are currently reporting [GOOD](#), but may see increased settled smoke by early morning tomorrow.

West Yellowstone has cleared up some compared to earlier this morning (screenshot captured a little after noon).



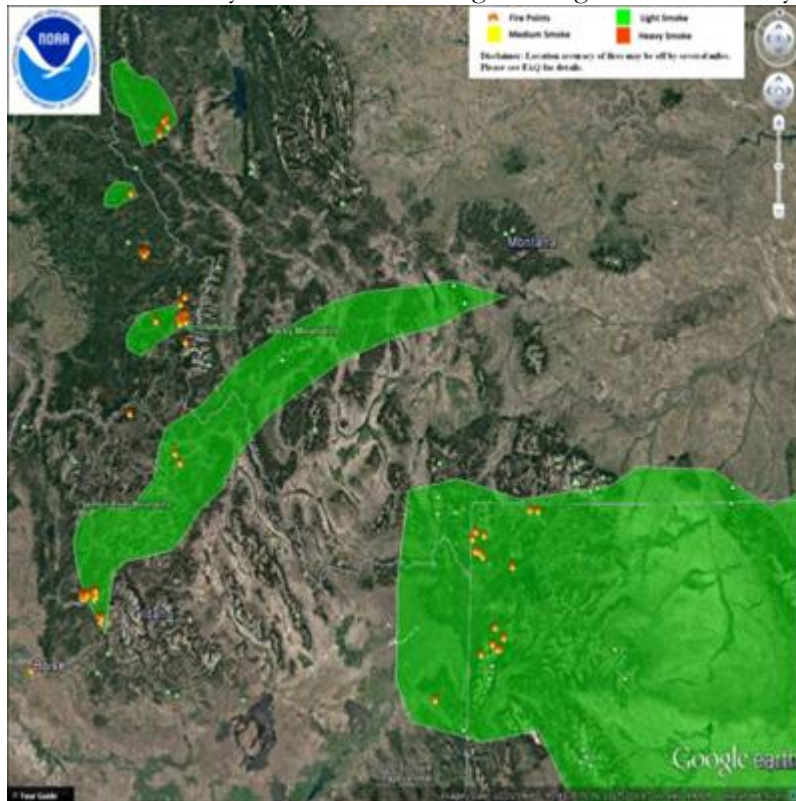
Source: [WestYellowstoneWebcams.com](http://WestYellowstoneWebcams.com)

Smoke and haze visible in southeast Montana yesterday.



Source: [NASA](http://worldview.nasa.gov)

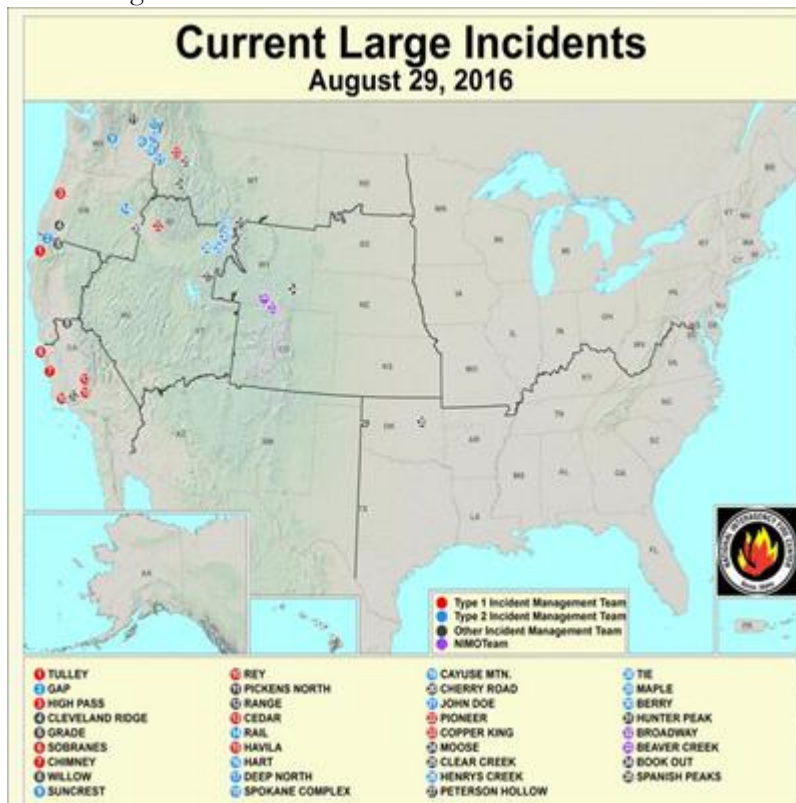
Satellite smoke analysis from this morning showing sources and likely impacts.



Source: [NOAA](#)



Current large active fires.



Source [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	West Yellowstone. Thompson Falls.
<a href="#">Unhealthy</a>	Hamilton
<a href="#">Unhealthy for Sensitive Groups</a>	Missoula
<a href="#">Moderate</a>	Frenchtown Seeley Lake
<a href="#">Good</a>	All other reporting locations.

#### NOAA Text Description:

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 1730Z August 28, 2016

SMOKE:

Area from Eastern Oregon and Idaho to the Dakotas:

Smoke of varying density was visible extending from eastern Oregon across southern Idaho and over southern and eastern Montana and much of Wyoming to the Dakotas. Some of the smoke also fanned out in a southerly direction reaching northern Utah. This smoke was attributed primarily to wildfire activity over eastern Oregon, Idaho, southwestern and western Montana, and northwestern Wyoming.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2016/2016H290318.html>

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AUGUST 30, 2016

**PM10 Location(s):** Thompson Falls

**Synopsis:** The Copper King Fire, located next to Thompson Falls, MT created significant air quality impacts in town.

**Documentation:**

*Wildfire Smoke Update for Tuesday, August 30, 2016 11:49 AM*

<http://svc.mt.gov/deq/todaysair/smokereport/mostRecentUpdate.aspx?smokeID=1096>

**Today's Report and Forecast**

An Air Quality Alert has been issued for Gallatin County and Sanders County in effect until further notice due to nearby wildfire activity. Significant air quality impacts are expected in the southern portion of Gallatin County near Yellowstone National Park. Significant air quality impacts are seen in Thompson Falls due to recent nearby fire activity and favorable conditions. This alert will be updated again at 900AM on August 31, 2016.

An Air Quality Alert means that particulates have been trending upwards and that an exceedance of the 24 hour National Ambient Air Quality Standard (NAAQS) has occurred or may occur in the near future.

**Particulate levels in Thompson Falls are Very Unhealthy**

**Particulate levels in West Yellowstone are Very Unhealthy**

**When air quality is Very Unhealthy... State and local health officials recommend that people with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.**

The Air Quality Alerts are maintained in Gallatin County due to the impacts seen at the West Yellowstone monitor, and Sanders County due to the impacts at the Thompson Falls monitor. Similar to yesterday, we are seeing a late morning trend of light winds, which allows smoke from the respective fires to drain into the communities and hit the monitors. Thompson Falls has reached the [VERY UNHEALTHY](#) category as of the 700-800AM hour, and has maintained elevated concentrations. West Yellowstone started off seeing much lower concentrations than yesterday morning, however a large spike at the 900-1000AM hour, light surface winds and active fire behavior of the Maple fire is reason for concern. Butte reached [UNHEALTHY FOR SENSITIVE GROUPS](#) late yesterday morning from transported smoke from Idaho, but was relieved yesterday afternoon, and is currently [MODERATE](#). Missoula and Frenchtown saw elevated concentrations yesterday due to smoke from Idaho intermittently reaching ground level. Cumulative exposure puts those locations at [MODERATE](#) and [UNHEALTHY FOR SENSITIVE GROUPS](#), respectively. The Seeley Lake monitor was affected less by this smoke. Hamilton was also victim to some smoke from Idaho, but is now reporting [MODERATE](#). In the northwest and further east, monitors remained from [GOOD](#) to [MODERATE](#) yesterday (Broadus did get to [UNHEALTHY FOR SENSITIVE GROUPS](#) for one hour yesterday morning), and is currently [GOOD](#). It looks like the warmer temperatures

helped keep any transported smoke above ground level.

- The Copper King fire near Thompson Falls is 24,778 acres and 20% contained with active fire behavior.
- The Maple fire near West Yellowstone is 33,058 acres and 0% contained with active fire behavior.
- The Pioneer fire near Boise, ID is currently 111,604 acres and 58% contained with active fire behavior.

The building ridge of high pressure continues today, maintaining southwest winds aloft, the continuation of warm and dry air moving into the state, and above normal temperatures. Red flag warnings have been issued by the NWS in northwest Montana and central to western Idaho, so fire activity will likely stay active and risk of new fires and smoke is possible.

Expect Thompson Falls and West Yellowstone to remain [VERY UNHEALTHY](#) with hopefully some relief this afternoon as rising temperatures helps lift smoke some. Expect impacts to reach [MODERATE](#) to [UNHEALTHY FOR SENSITIVE GROUPS](#) for most locations today. The Bitterroot and Missoula Valleys are more susceptible to impacts due to their proximities to the major wildfires and the transport winds. Northwest Montana may see haze from the Copper King fire if winds help the smoke travel to the northeast. Southeastern Montana may again see intermittent impacts from the fires in Wyoming and could reach [UNHEALTHY FOR SENSITIVE GROUPS](#) levels. Hopefully, like yesterday, the warmer temperatures help keep any smoke above ground level.

Similar weather conditions are forecasted for tomorrow, which should not bring significant changes from what is seen today, unless new fire activity is added to the list of smoke sources. Later in the week should be cooler and unsettled with a low-pressure trough swinging in from the northwest, which should help alleviate particulate impacts.

### **Today's Summary**

Air quality is [GOOD](#) to [MODERATE](#) at most locations this morning. West Yellowstone and Thompson Falls are at [VERY UNHEALTHY](#) right now and Air Quality Alerts are maintained in their counties. Southwest Montana, Hamilton, and the Missoula valley may see impacts, being downwind of active fires in Idaho. All other locations are currently reporting [GOOD](#), but may see increased settled smoke by tonight and early morning tomorrow.

West Yellowstone is pretty smoky this morning (screenshot captured at 9:28 MDT).



Source: [WestYellowstoneWebcams.com](http://WestYellowstoneWebcams.com)

Smoke from the Copper King fire draining into Thompson Falls yesterday.

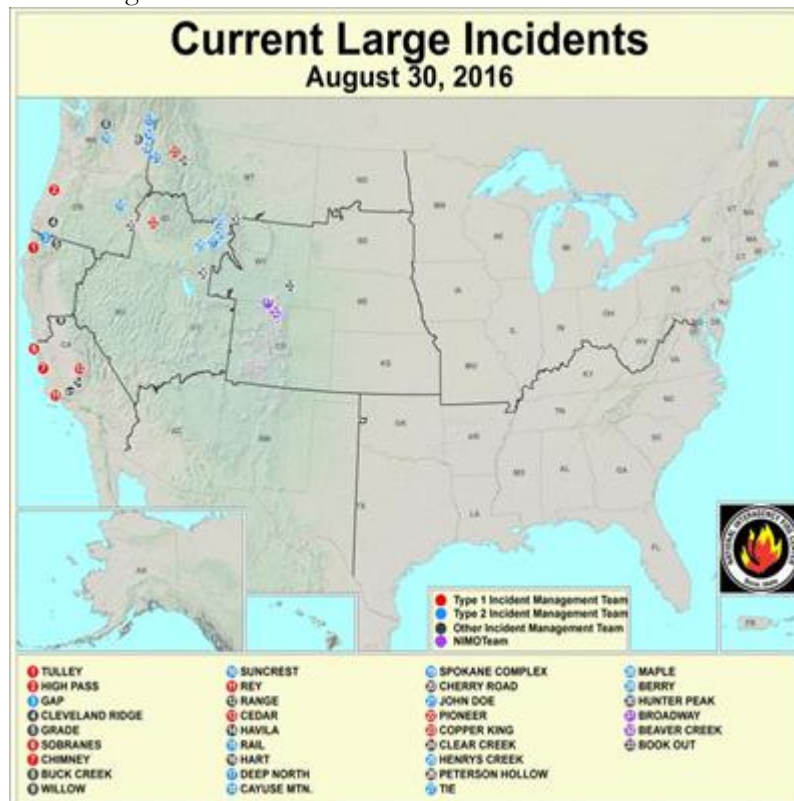


Source: [NASA](http://NASA)





Current large active fires.



Source [USFS](#)

Today's particulate report below compares particulate levels received from DEQ's reporting stations with MTDEQ's [Health Effect Categories](#).

Health Effects Categories	City
<a href="#">Hazardous</a>	
<a href="#">Very Unhealthy</a>	Thompson Falls West Yellowstone
<a href="#">Unhealthy</a>	
<a href="#">Unhealthy for Sensitive Groups</a>	Frenchtown
<a href="#">Moderate</a>	Missoula Seeley Lake Hamilton Butte Bozeman
<a href="#">Good</a>	All other reporting locations.

**NOAA Text Description:**

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY  
THROUGH 1800Z August 30, 2016

**SMOKE:**

Northwestern US/Intermountain West/North Central Plains/Great  
Lakes/Southwest to South Central Canada:

A large amount of remnant thin smoke covers parts of the Pacific Northwest/southern British Columbia/southern Alberta stretching east and southeast covering portions of Montana, Wyoming, Nebraska, the Dakotas, Minnesota, Saskatchewan, Manitoba, and the Upper Great Lakes region. Additional thin smoke was seen in southern Idaho. Pockets of moderately dense smoke were also still seen this morning with the thickest smoke over central and eastern Montana. The majority of this smoke is from wildfires in Idaho, Montana, and Wyoming though fires in other western US states have also contributed.

<http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2016/2016H301800.html>

## HISTORICAL GRAPHS FOR 2015 & 2016 PM<sub>2.5</sub> EXCEPTIONAL EVENTS

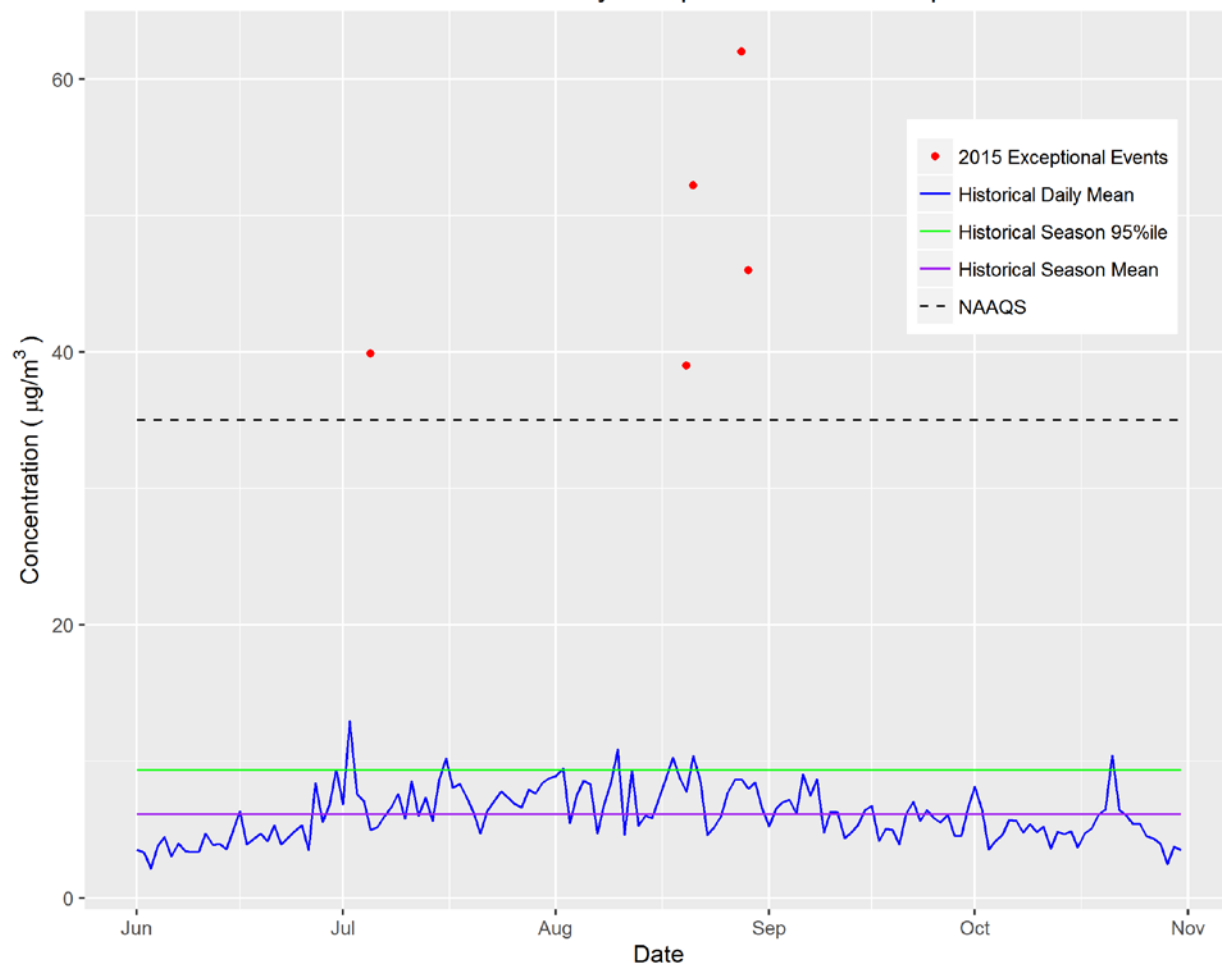
### HISTORICAL GRAPHS FOR 2015 PM<sub>2.5</sub> EXCEPTIONAL EVENTS

The graphs shown here compare the exceptional events for a monitoring station with the daily average value for that day. This data was created by extracting historical data at each station, removing all null and flagged data, and then developing an average daily value. The daily average and corresponding mean and 95 percentile information is shown for the wildfire season only (June 1 – October 31). The following table outlines the available data for each station.

Station	Years Used for Historical Data	Notes
<b>Birney</b>	2010 - 2014	Data prior to 2010 is not available. Monitoring began at this station on 02/02/2010.
<b>Broadus</b>	2010 - 2014	Data prior to 2010 is not available. Monitoring began at this station on 01/01/2010.
<b>Butte</b>	2009 - 2014	Data prior to 2010 is not available. Continuous monitoring began at this station on 03/19/2010.
<b>Flathead</b>	2011 - 2014	Data prior to 2011 is not available. Continuous monitoring began at this station on 8/27/2011.
<b>Frenchtown</b>	2009 - 2014	Monitoring began at this station on 04/08/2009.
<b>Hamilton</b>	2009 - 2014	Full continuous monitor data available
<b>Helena</b>	2009 - 2014	Monitoring began at this station on 08/04/2009.
<b>Lewistown</b>	2012 - 2014	Data prior to 2012 is not available. Monitoring began at the station on 07/25/2012.
<b>Libby</b>	2009 - 2014	Full continuous monitor data available. Prior to 2011, continuous monitor data was collected in conjunction with filter based data and both were submitted to AQS. Only continuous data is used for this analysis.
<b>Malta</b>	2012 - 2014	Data prior to 2012 is not available. Monitoring began at the station on 07/24/2012.
<b>Missoula</b>	2009 - 2014	Full continuous monitor data available
<b>Ncore</b>	2011 - 2014	Data prior to 2011 is not available. Monitoring began at this station on 01/01/2011.
<b>Sidney</b>	2009 - 2014	Full continuous monitor data available

## Birney

Historical PM2.5 Data for Birney Compared to 2015 Exceptional Events

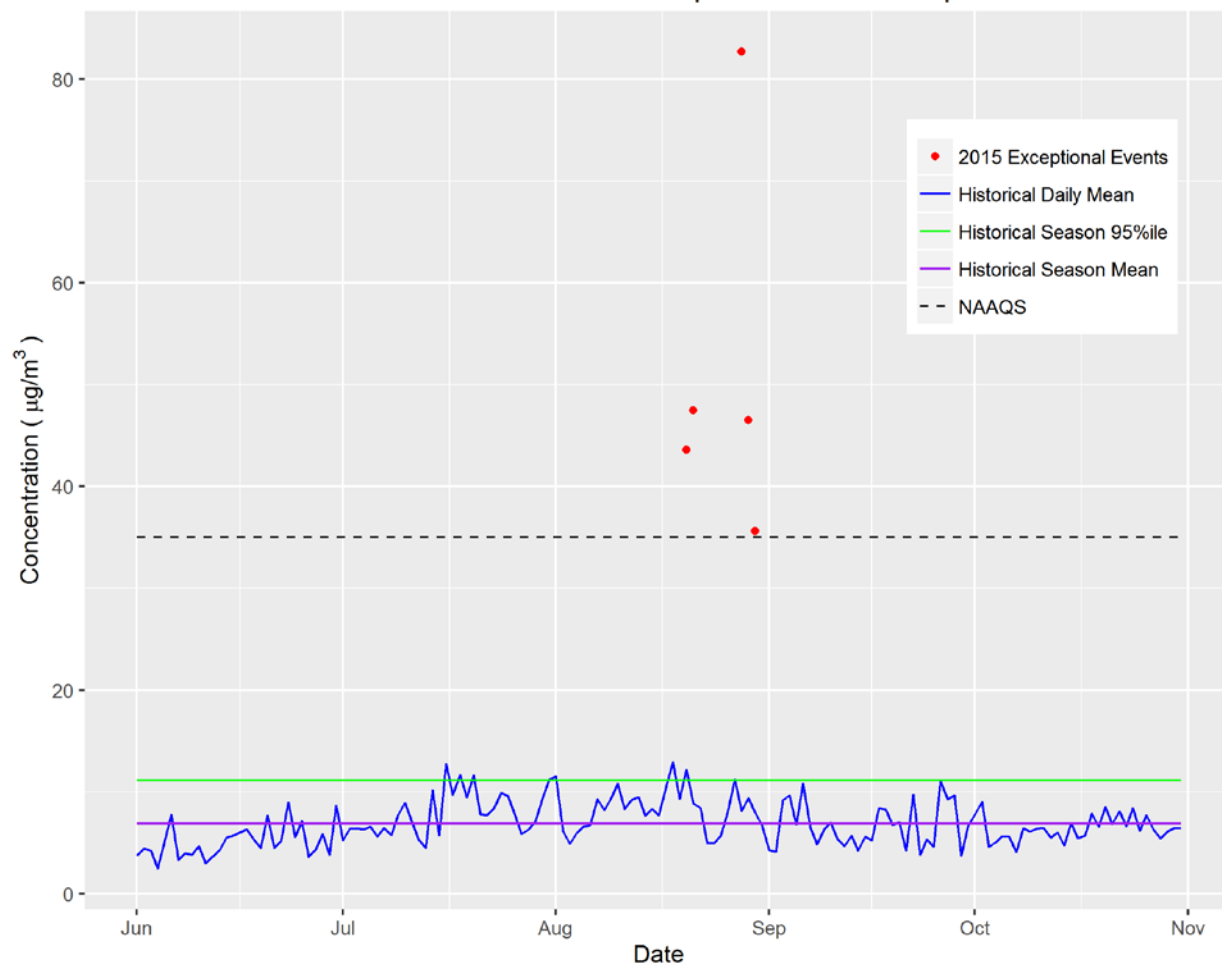


### EXCEPTION EVENTS FOR BIRNEY

Date	Concentration
7/5/2015	39.9
8/20/2015	39.0
8/21/2015	52.2
8/28/2015	62.0
8/29/2015	46.0

## Broadus

Historical PM2.5 Data for Broadus Compared to 2015 Exceptional Events



### EXCEPTION EVENTS FOR BROADUS

Date	Concentration
8/20/2015	43.6
8/21/2015	47.5
8/28/2015	82.7
8/29/2015	46.5
8/30/2015	35.6



## Butte

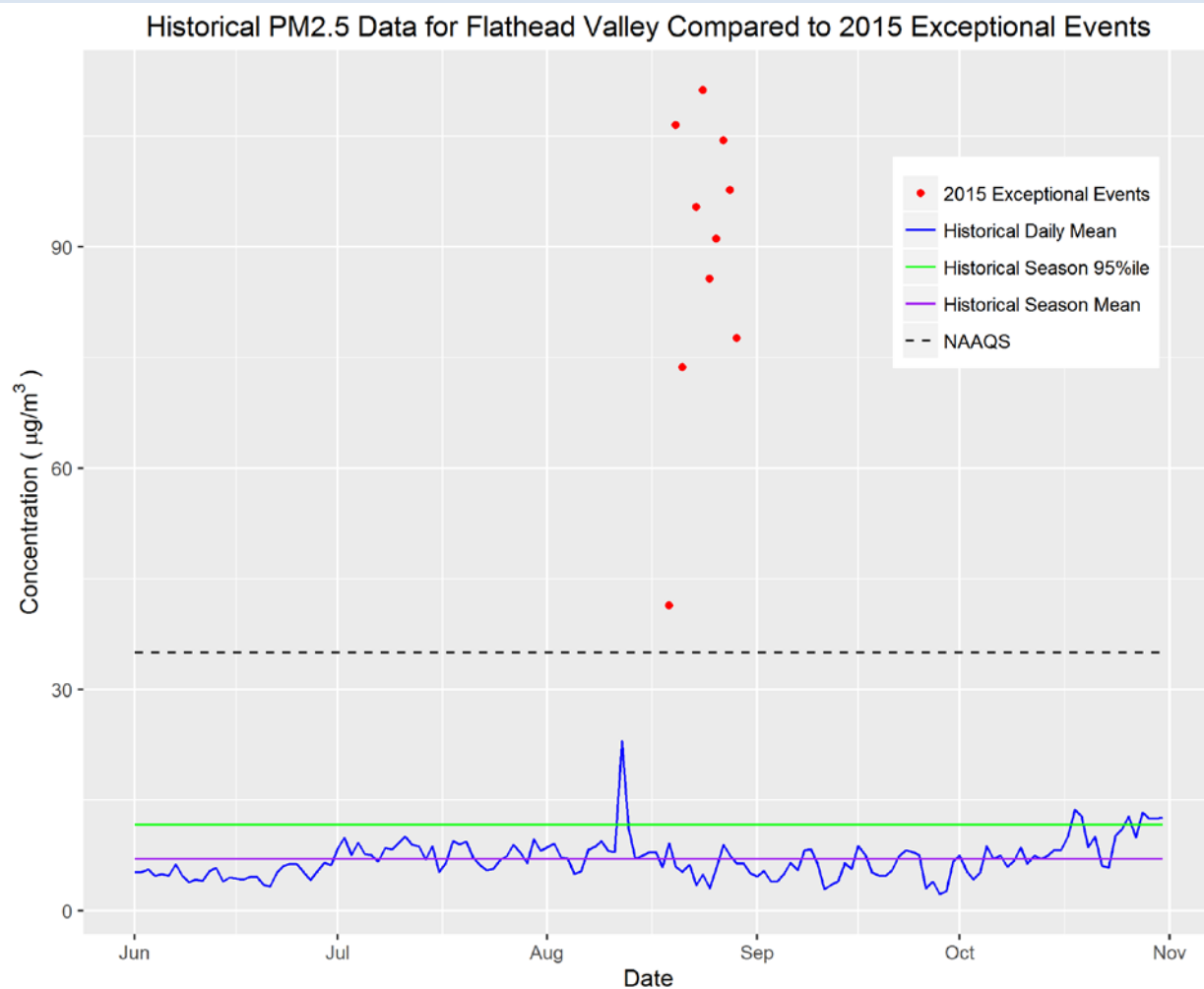
Historical PM2.5 Data for Butte Compared to 2015 Exceptional Events



### EXCEPTION EVENTS FOR BUTTE

Date	Concentration
8/15/2015	65.4
8/19/2015	44.1
8/20/2015	82.8
8/21/2015	58.4
8/23/2015	41.8
8/25/2015	56.0
8/28/2015	85.3
8/29/2015	89.3

## Flathead



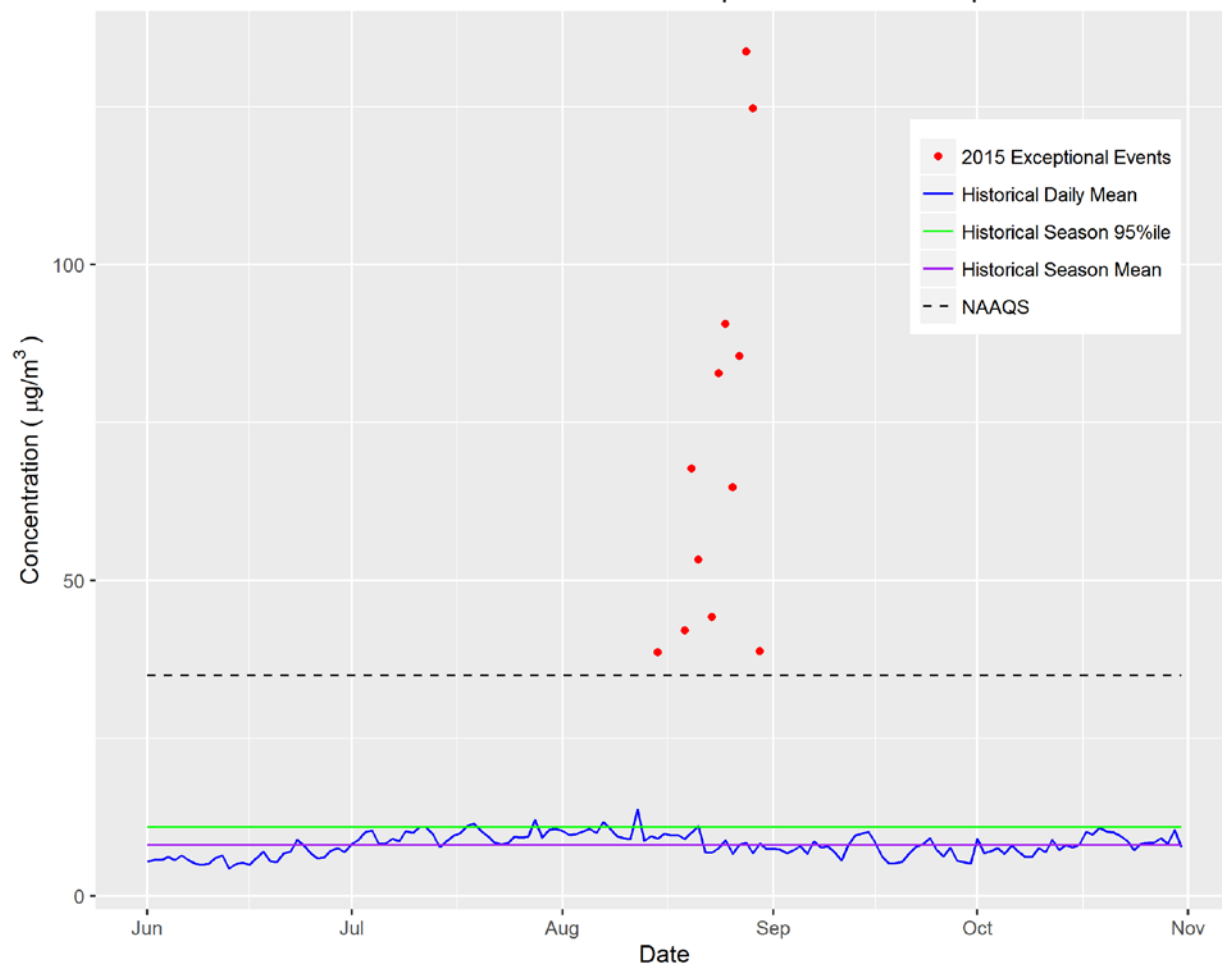
### EXCEPTION EVENTS FOR FLATHEAD\*

Date	Concentration
8/19/2015	41.4
8/20/2015	106.5
8/21/2015	73.7
8/23/2015	95.4
8/24/2015	111.2
8/25/2015	85.7
8/26/2015	91.1
8/27/2015	104.4
8/28/2015	97.7
8/29/2015	77.6

\* The 'Flathead' monitor refers to the PM2.5 monitor located in Columbia Falls, MT. When referenced in wildfire smoke updates, and in this document, it is called Flathead to match the label on the Montana DEQ Today's Air Website.

## Frenchtown

Historical PM2.5 Data for Frenchtown Compared to 2015 Exceptional Events

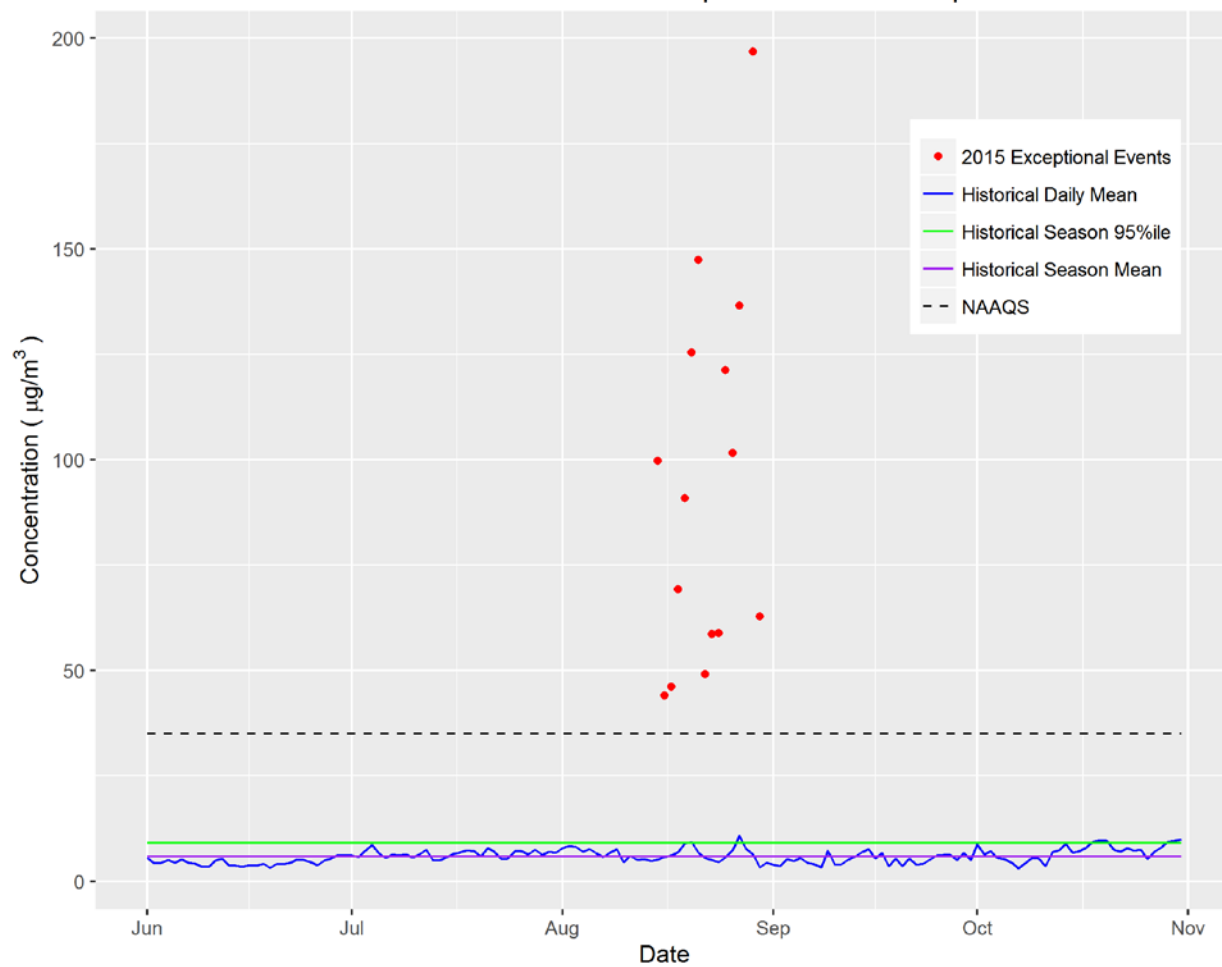


### EXCEPTION EVENTS FOR FRENCHTOWN

Date	Concentration
8/15/2015	38.6
8/19/2015	42.1
8/20/2015	67.7
8/21/2015	53.3
8/23/2015	44.2
8/24/2015	82.8
8/25/2015	90.6
8/26/2015	64.7
8/27/2015	85.5
8/28/2015	133.7
8/29/2015	124.7
8/30/2015	38.8

## Hamilton

Historical PM2.5 Data for Hamilton Compared to 2015 Exceptional Events



### EXCEPTION EVENTS FOR HAMILTON

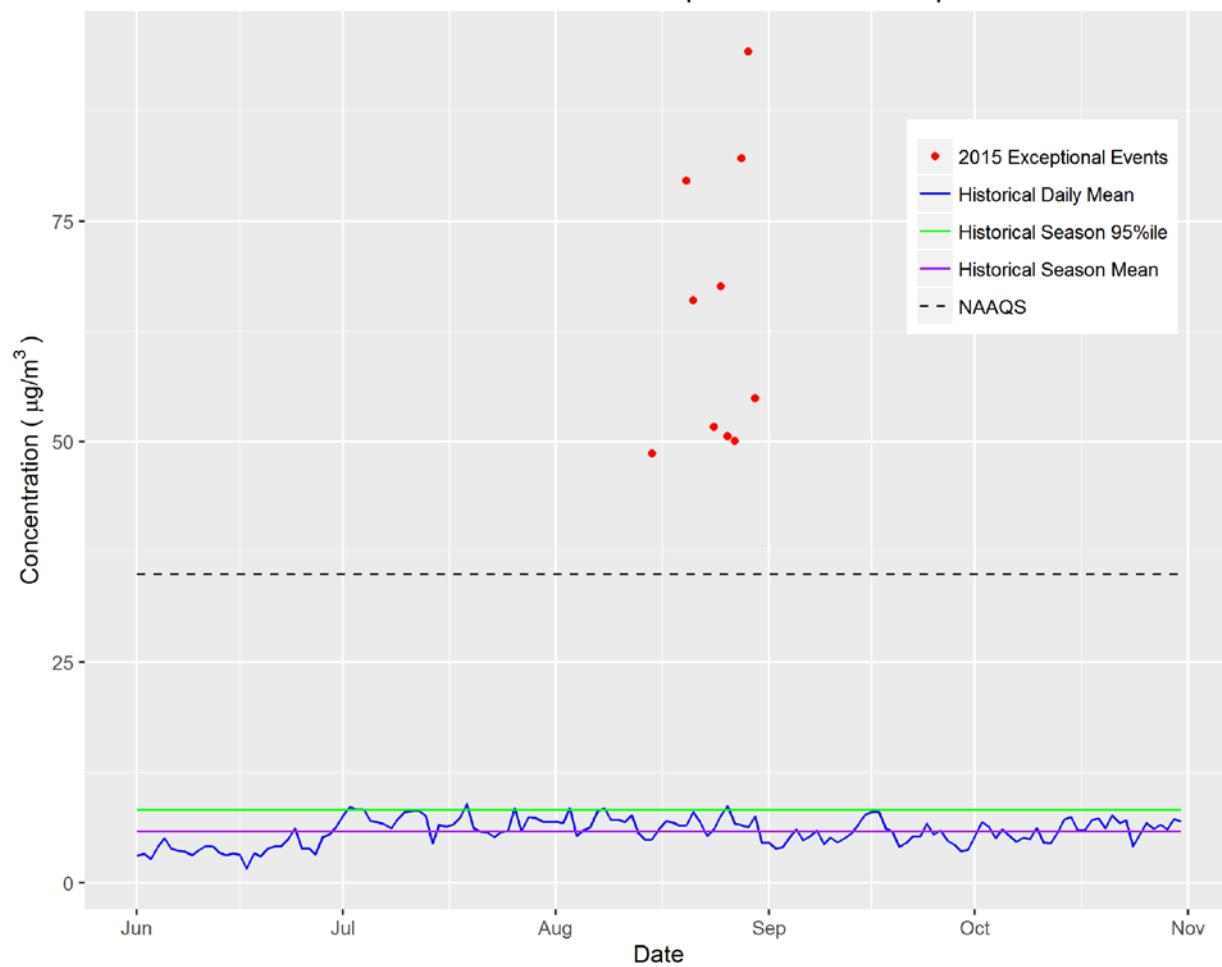
Date	Concentration
8/15/2015	99.8
8/16/2015	44.0
8/17/2015	46.2
8/18/2015	69.2
8/19/2015	90.9
8/20/2015	125.4
8/21/2015	147.4
8/22/2015	49.1
8/23/2015	58.6
8/24/2015	58.9
8/25/2015	121.3
8/26/2015	101.6
8/27/2015	136.6

<b>8/29/2015</b>	196.8
<b>8/30/2015</b>	62.8



## Helena

Historical PM2.5 Data for Helena Compared to 2015 Exceptional Events

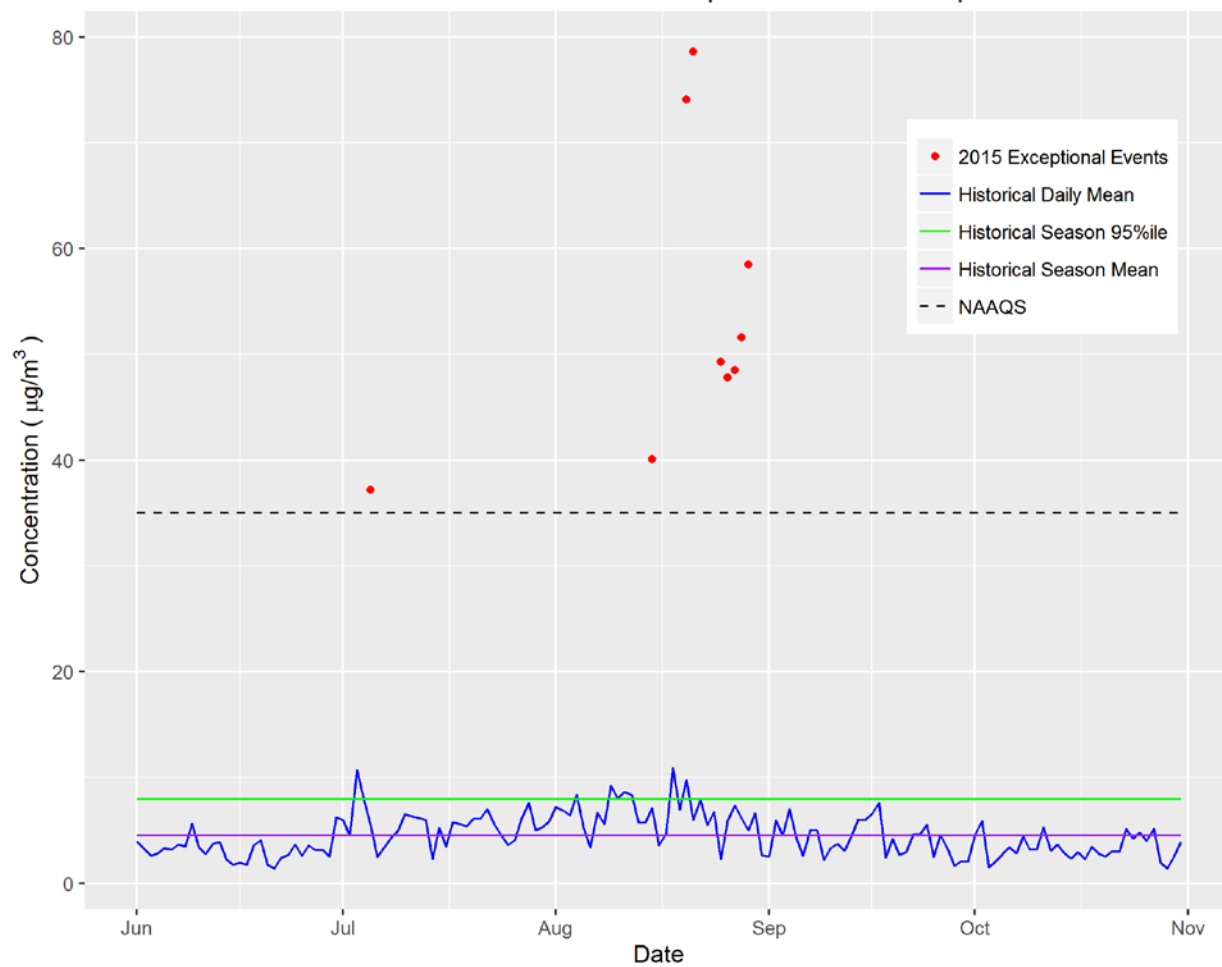


### EXCEPTION EVENTS FOR HELENA

Date	Concentration
8/15/2015	48.7
8/20/2015	79.6
8/21/2015	66.0
8/24/2015	51.7
8/25/2015	67.6
8/26/2015	50.6
8/27/2015	50.1
8/28/2015	82.1
8/29/2015	94.2
8/30/2015	54.9

## Lewistown

Historical PM2.5 Data for Lewistown Compared to 2015 Exceptional Events

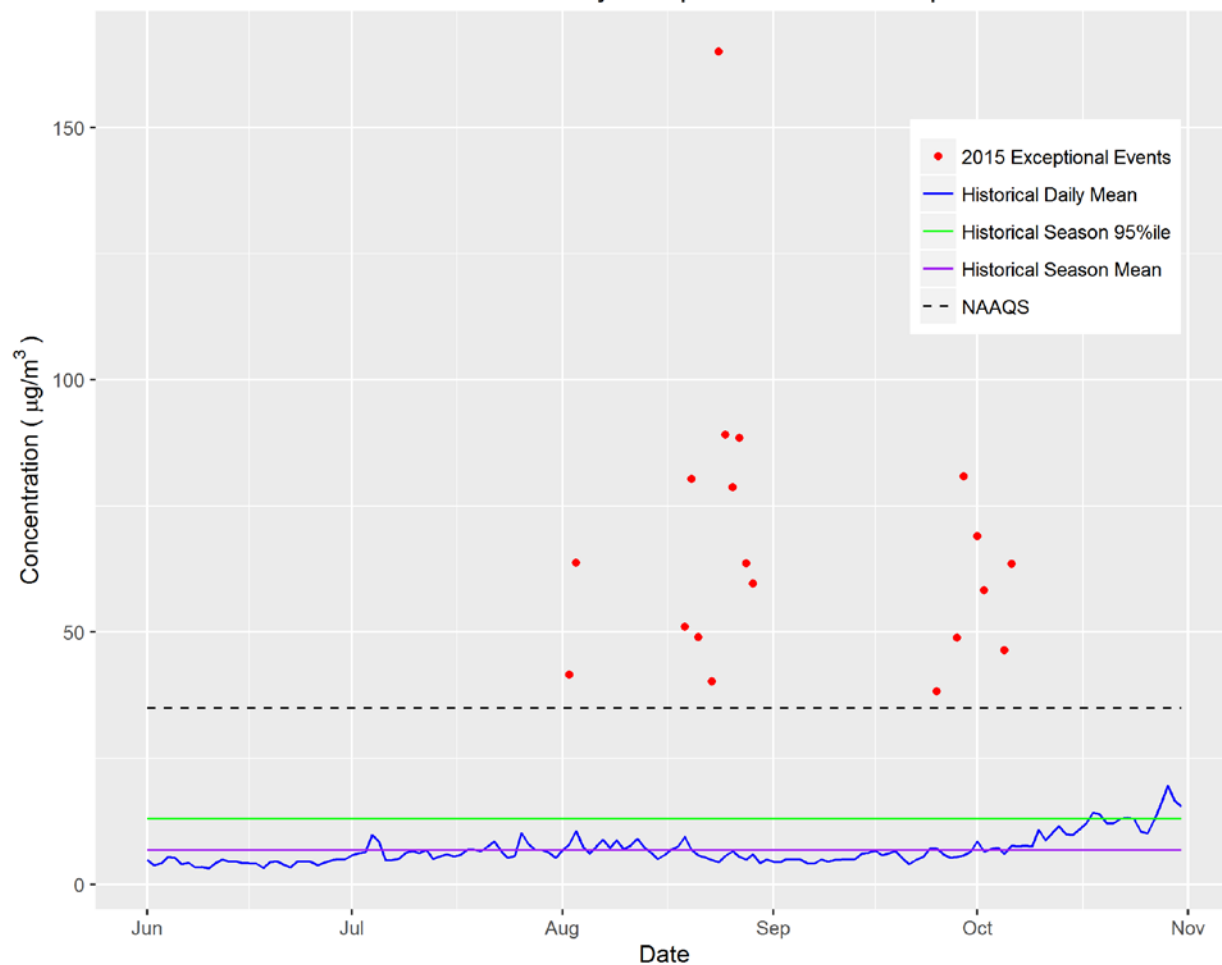


### EXCEPTION EVENTS FOR LEWISTOWN

Date	Concentration
7/5/2015	37.2
8/15/2015	40.1
8/20/2015	74.1
8/21/2015	78.6
8/25/2015	49.3
8/26/2015	47.8
8/27/2015	48.5
8/28/2015	51.6
8/29/2015	58.5

## Libby

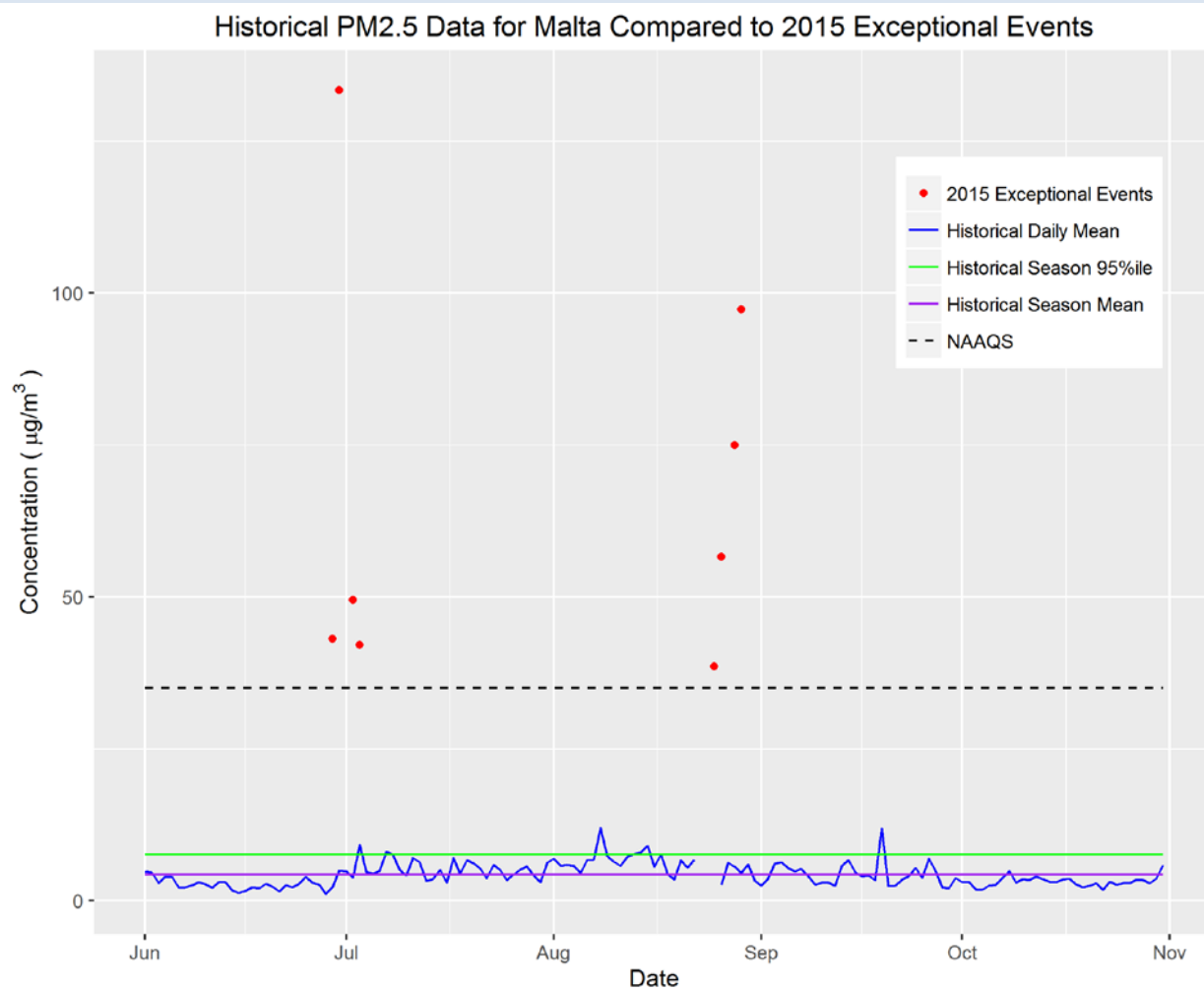
Historical PM2.5 Data for Libby Compared to 2015 Exceptional Events



### EXCEPTION EVENTS FOR LIBBY

Date	Concentration	Date	Concentration
8/2/2015	41.6	8/28/2015	63.6
8/3/2015	63.7	8/29/2015	59.6
8/19/2015	51.1	9/25/2015	38.3
8/20/2015	80.4	9/28/2015	48.9
8/21/2015	49.0	9/29/2015	80.9
8/23/2015	40.2	10/1/2015	69.0
8/24/2015	165.0	10/2/2015	58.3
8/25/2015	89.1	10/5/2015	46.4
8/26/2015	78.7	10/6/2015	63.5
8/27/2015	88.5		

## Malta

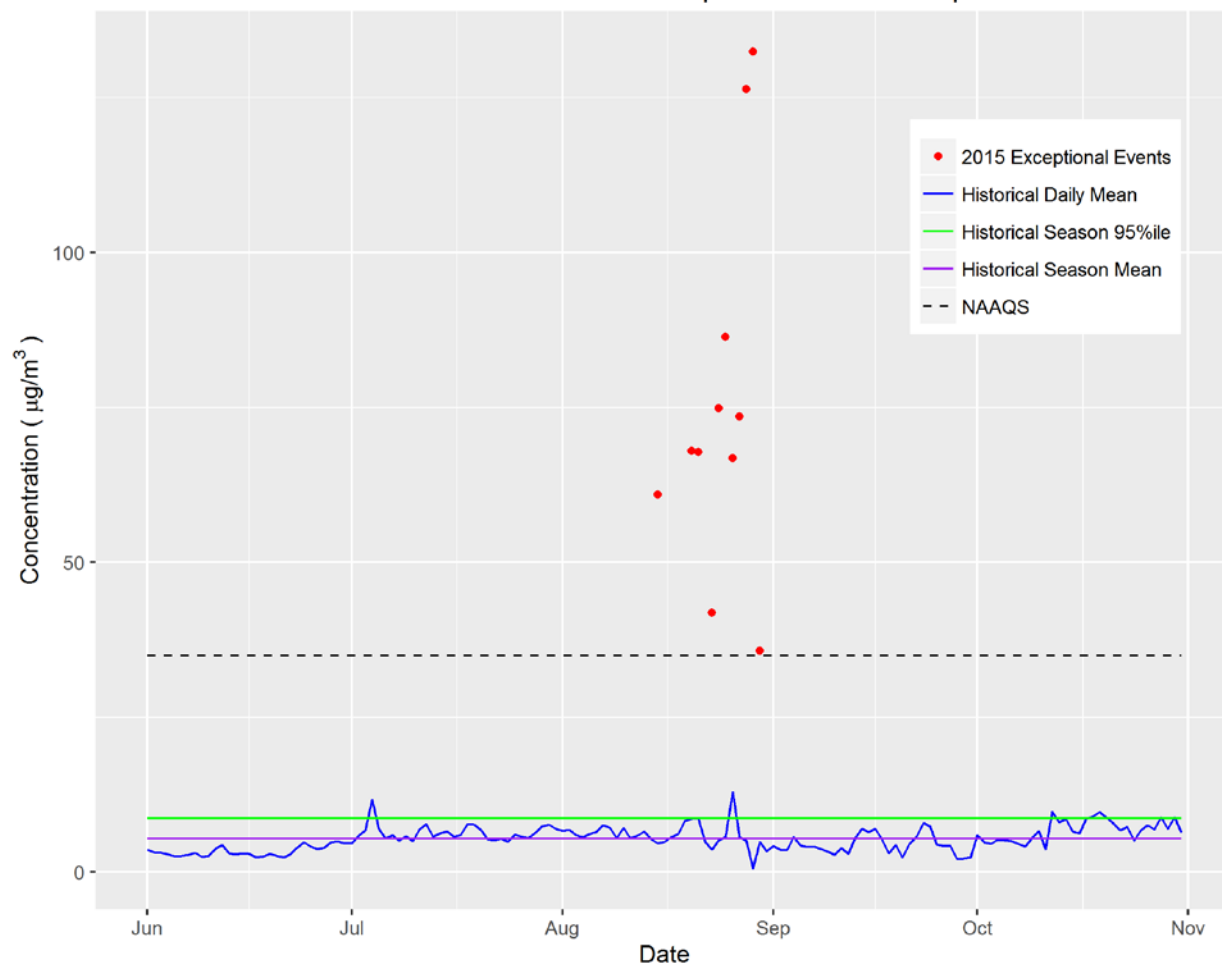


### EXCEPTION EVENTS FOR MALTA

Date	Concentration
6/29/2015	43.1
6/30/2015	133.4
7/2/2015	49.5
7/3/2015	42.1
8/25/2015	38.6
8/26/2015	56.6
8/28/2015	75.0
8/29/2015	97.3

## Missoula

Historical PM2.5 Data for Missoula Compared to 2015 Exceptional Events

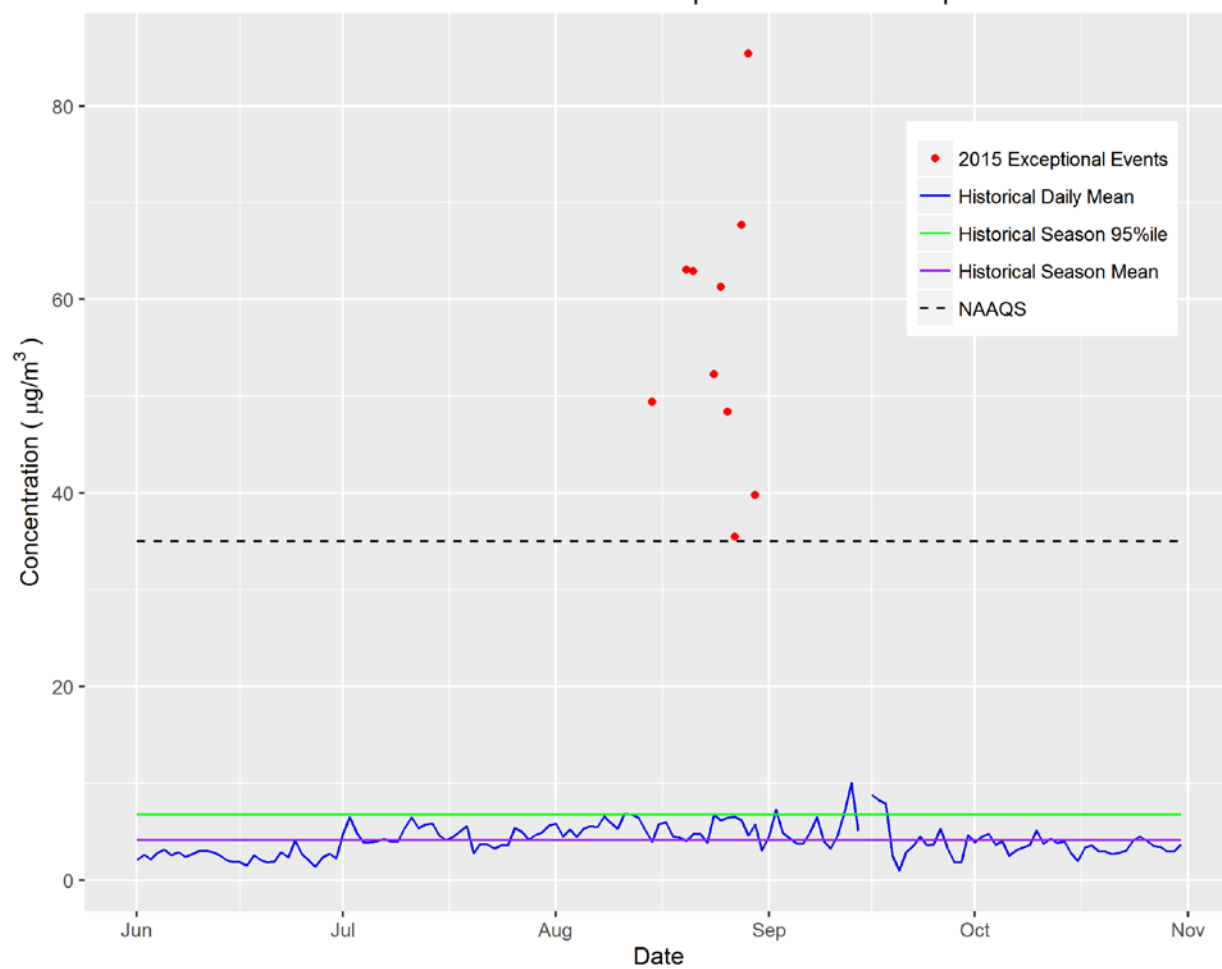


### EXCEPTION EVENTS FOR MISSOULA

Date	Concentration
8/15/2015	60.9
8/20/2015	68.0
8/21/2015	67.8
8/23/2015	41.9
8/24/2015	74.9
8/25/2015	86.4
8/26/2015	66.8
8/27/2015	73.5
8/28/2015	126.4
8/29/2015	132.4
8/30/2015	35.7



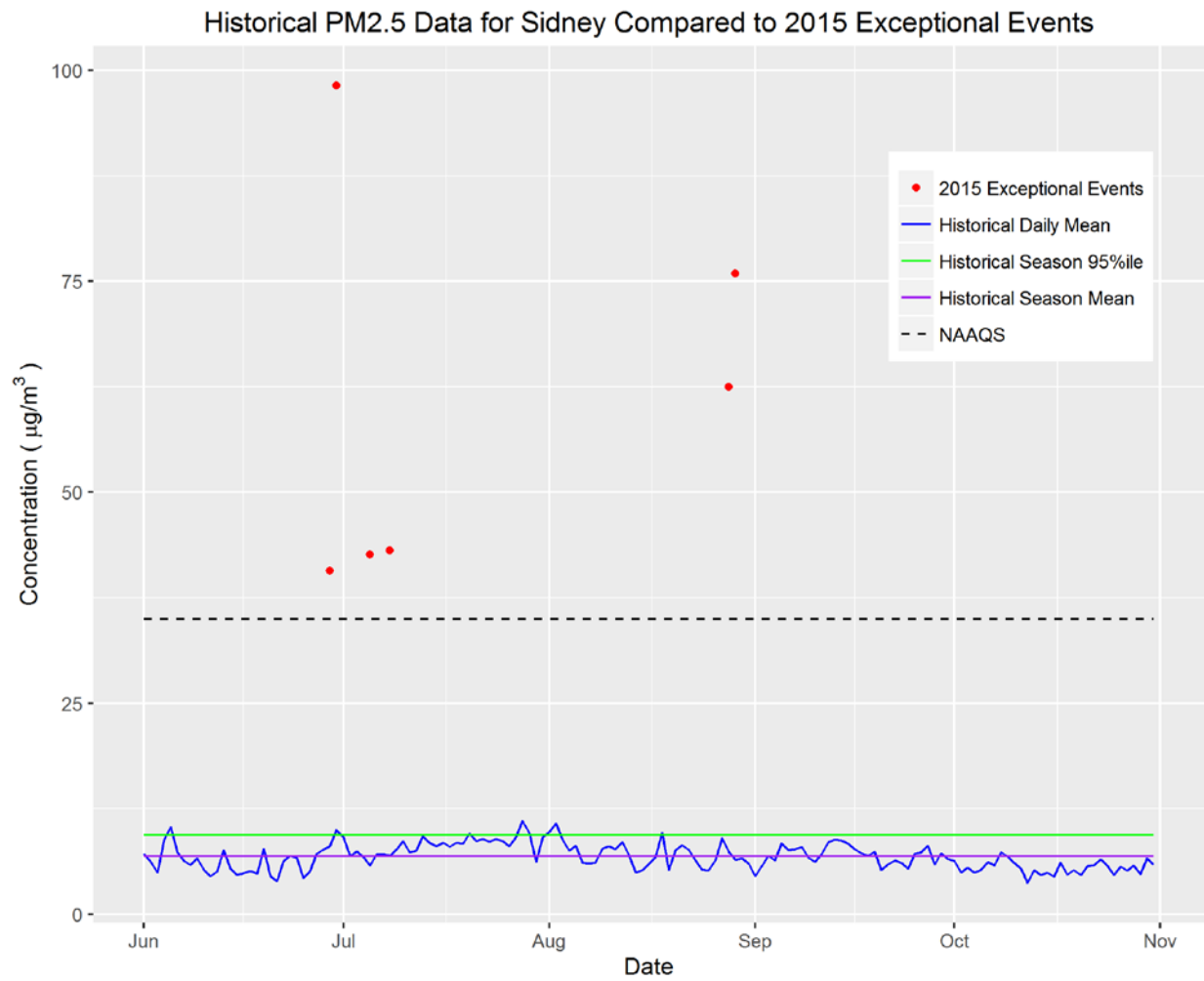
Historical PM2.5 Data for NCore Compared to 2015 Exceptional Events



## EXCEPTION EVENTS FOR NCore

Date	Concentration
8/15/2015	49.4
8/20/2015	63.1
8/21/2015	62.9
8/24/2015	52.3
8/25/2015	61.3
8/26/2015	48.4
8/27/2015	35.5
8/28/2015	67.7
8/29/2015	85.4
8/30/2015	39.8

## Sidney



### EXCEPTION EVENTS FOR SIDNEY

Date	Concentration
6/29/2015	40.7
6/30/2015	98.2
7/5/2015	42.6
7/8/2015	43.1
8/28/2015	62.5
8/29/2015	75.9

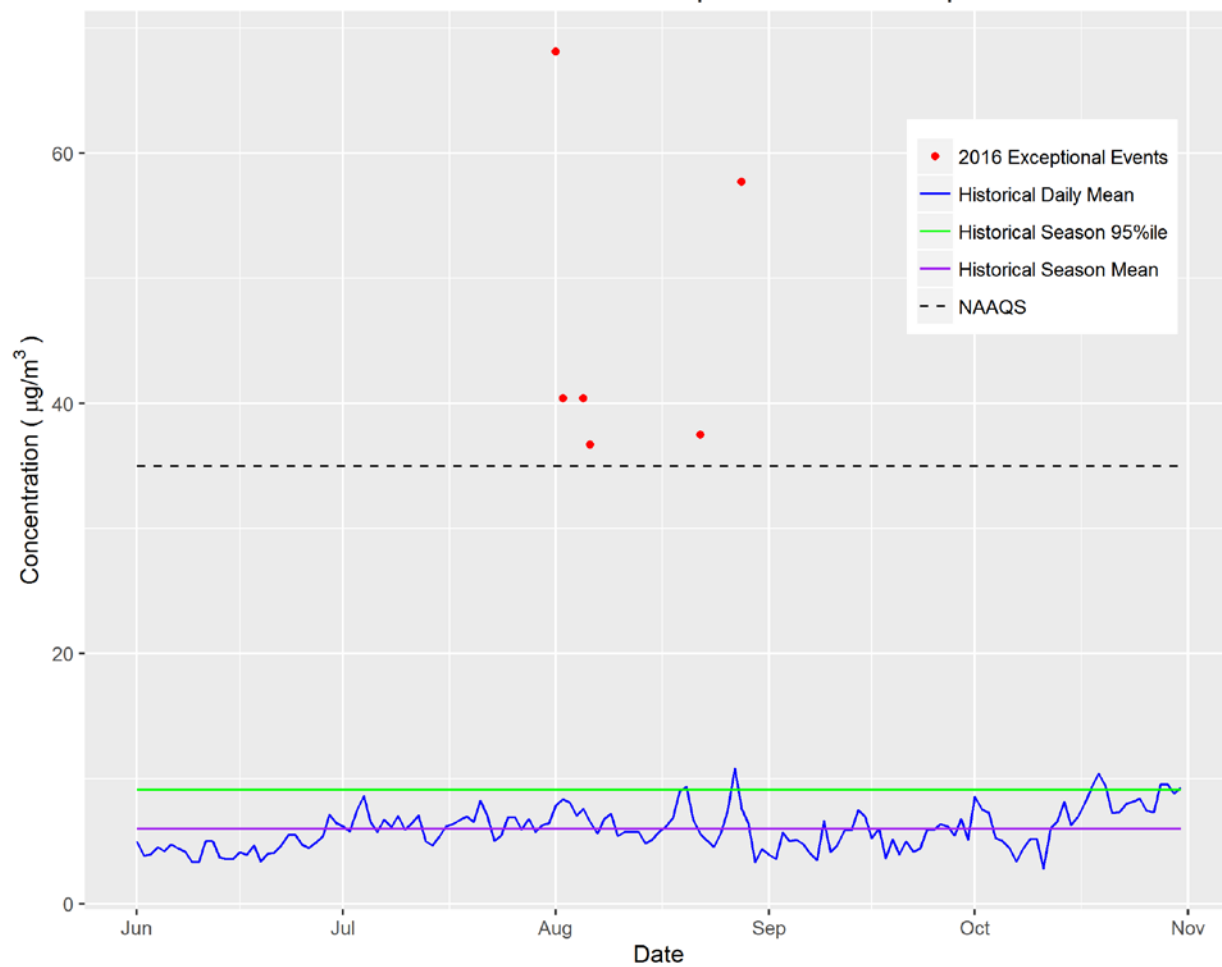
## HISTORICAL GRAPHS FOR 2016 PM<sub>2.5</sub> EXCEPTIONAL EVENTS

The graphs shown here compare the exceptional events for a monitoring station with the daily average value for that day. This data was created by extracting historical data at each station, removing all null and flagged data, and then developing an average daily value. The daily average and corresponding mean and 95 percentile information is shown for the wildfire season only (June 1 – October 31). The following table outlines the available data for each station.

Station	Years Used for Historical Data	Notes
<b>Hamilton</b>	2009 - 2015	Full continuous monitor data available

## Hamilton

Historical PM2.5 Data for Hamilton Compared to 2016 Exceptional Events



### EXCEPTION EVENTS FOR HAMILTON

Date	Concentration
8/1/2016	68.1
8/2/2016	40.4
8/5/2016	40.4
8/6/2016	36.7
8/22/2016	37.5
8/28/2016	57.7

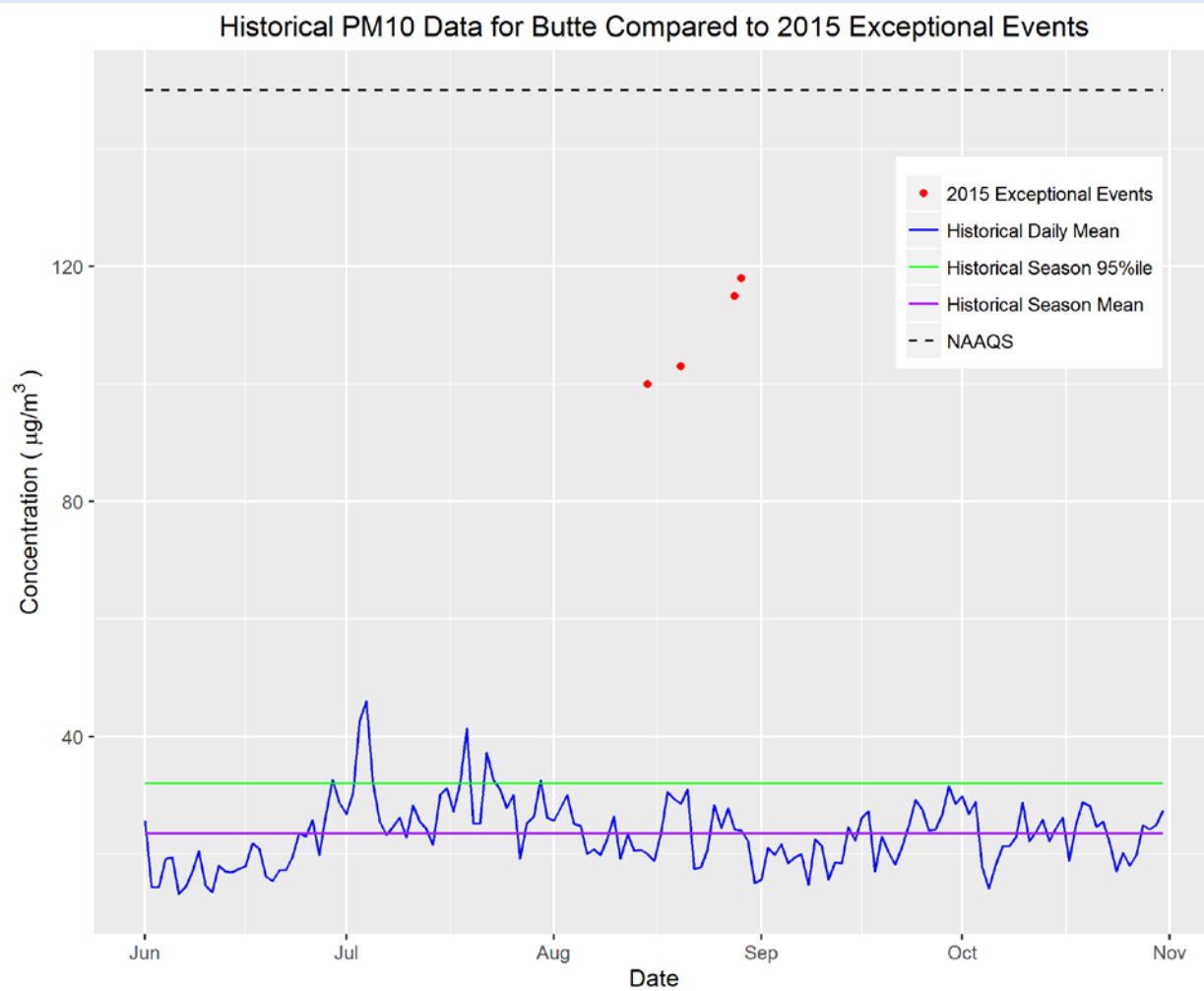
## HISTORICAL GRAPHS FOR 2015 & 2016 PM<sub>10</sub> EXCEPTIONAL EVENTS

### HISTORICAL GRAPHS FOR 2015 PM<sub>10</sub> EXCEPTIONAL EVENTS

The graphs shown here compare the exceptional events for a monitoring station with the daily average value for that day. This data was created by extracting historical data at each station, removing all null and flagged data, and then developing an average daily value. The daily average and corresponding mean and 95 percentile information is shown for the wildfire season only (June 1 – October 31). The following table outlines the available data for each station.

Station	Years Used for Historical Data	Notes
<b>Butte</b>	2009 - 2014	Continuous monitor data available since 01/01/2008.
<b>Columbia Falls</b>	2011 - 2014	Continuous monitor data available since 08/27/2011.
<b>Kalispell</b>	2011 - 2014	Continuous monitor data available since 09/09/2011.
<b>Libby</b>	2009 - 2014	Continuous monitor data available since 01/01/2008.
<b>Missoula</b>	2009 - 2014	Continuous monitor data available since 01/01/2008.
<b>Thompson Falls</b>	2009 - 2014	Continuous monitor data available since 10/01/2013. Filter based monitor data available 1/1/2009 through 09/25/2013.
<b>Whitefish</b>	2011 - 2014	Continuous monitor data available since 08/27/2011.

## Butte

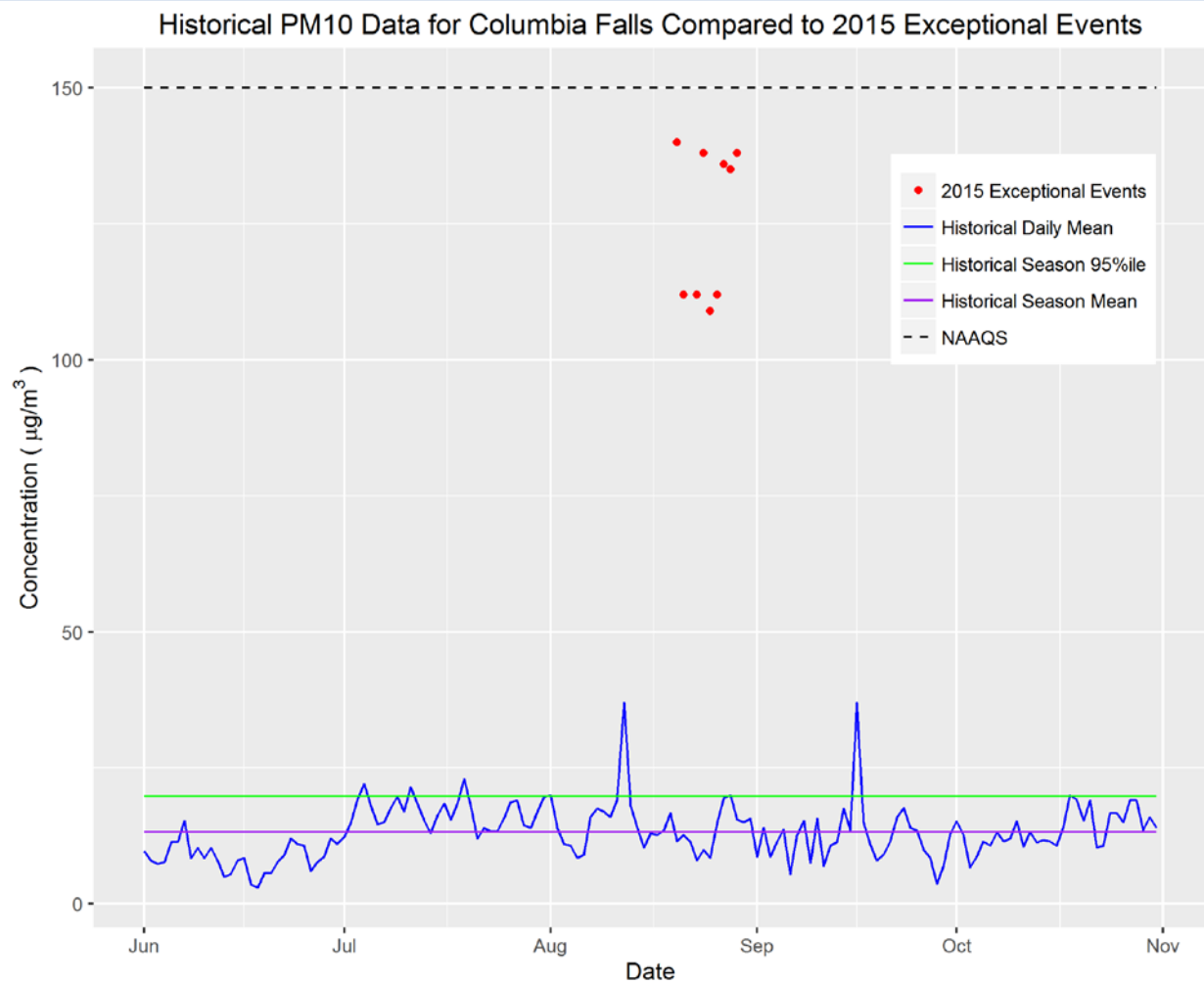


### EXCEPTION EVENTS FOR BUTTE

Date	Concentration
8/15/2015	100
8/20/2015	103
8/28/2015	115
8/29/2015	118



## Columbia Falls

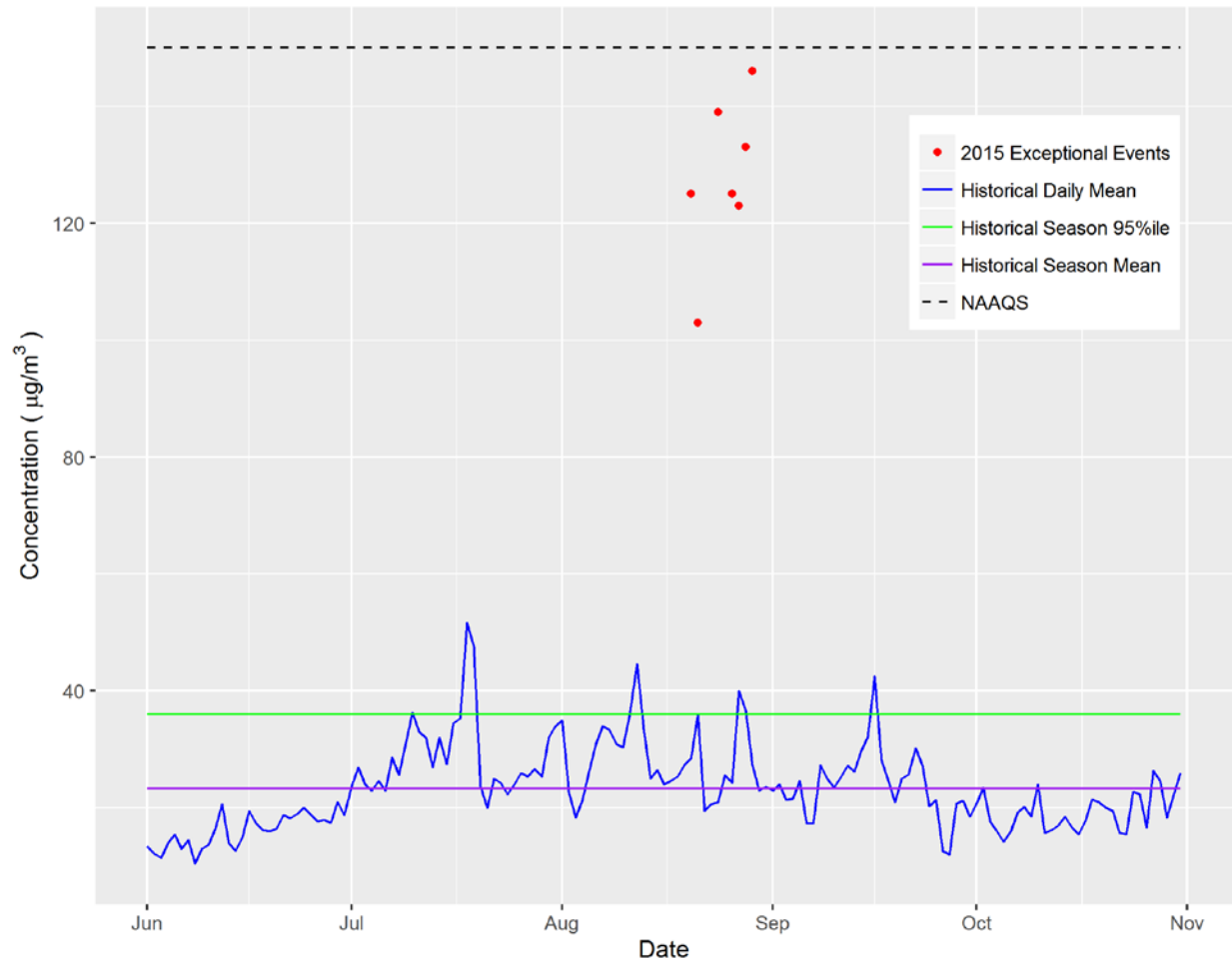


### EXCEPTION EVENTS FOR COLUMBIA FALLS

Date	Concentration
8/20/2015	140
8/21/2015	112
8/23/2015	112
8/24/2015	138
8/25/2015	109
8/26/2015	112
8/27/2015	136
8/28/2015	135
8/29/2015	138

## Kalispell

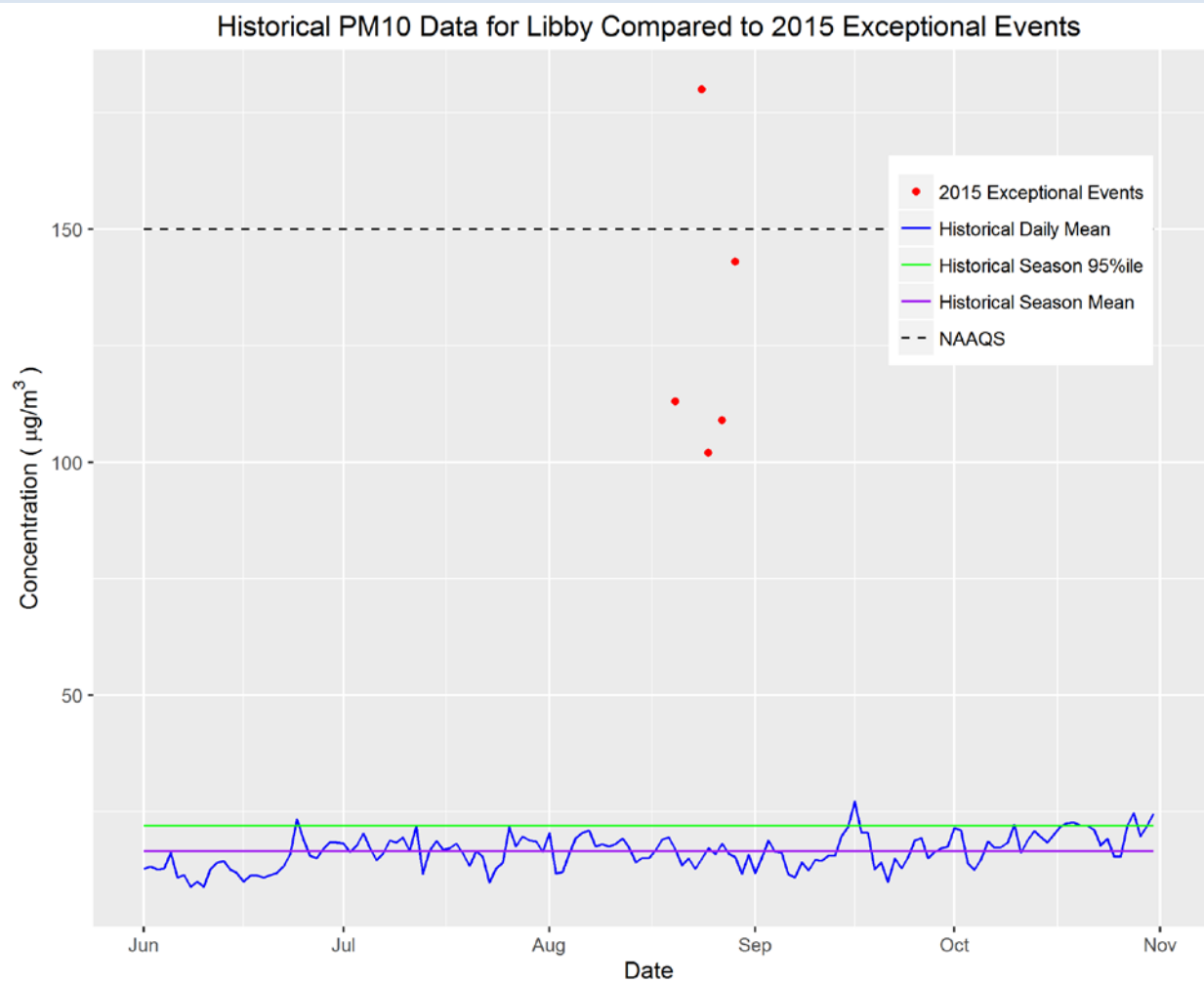
Historical PM10 Data for Kalispell Compared to 2015 Exceptional Events



### EXCEPTION EVENTS FOR KALISPELL

Date	Concentration
8/20/2015	125
8/21/2015	103
8/24/2015	139
8/26/2015	125
8/27/2015	123
8/28/2015	133
8/29/2015	146

## Libby

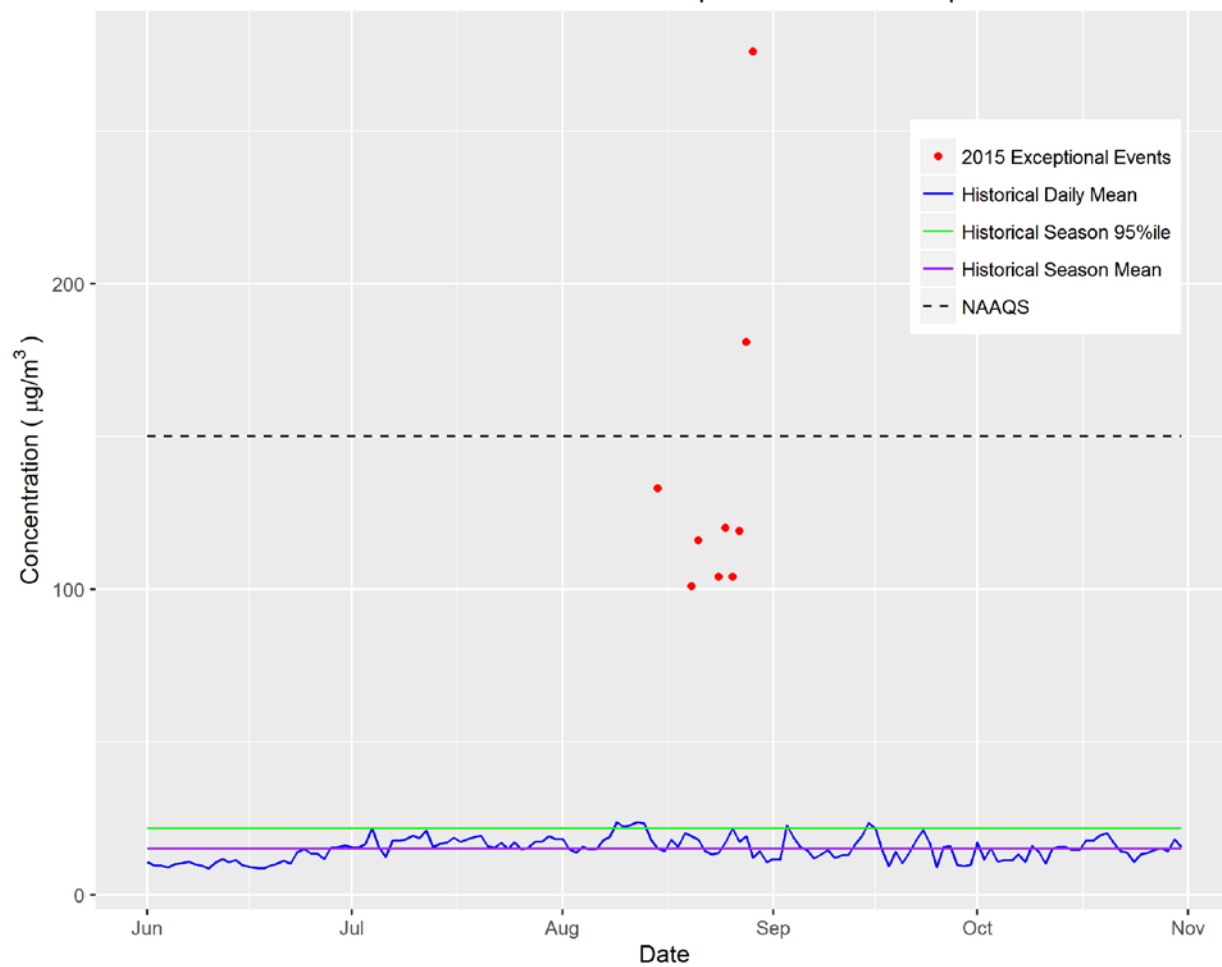


### EXCEPTION EVENTS FOR LIBBY

Date	Concentration
8/20/2015	113
8/24/2015	180
8/25/2015	102
8/27/2015	109
8/29/2015	143

## Missoula

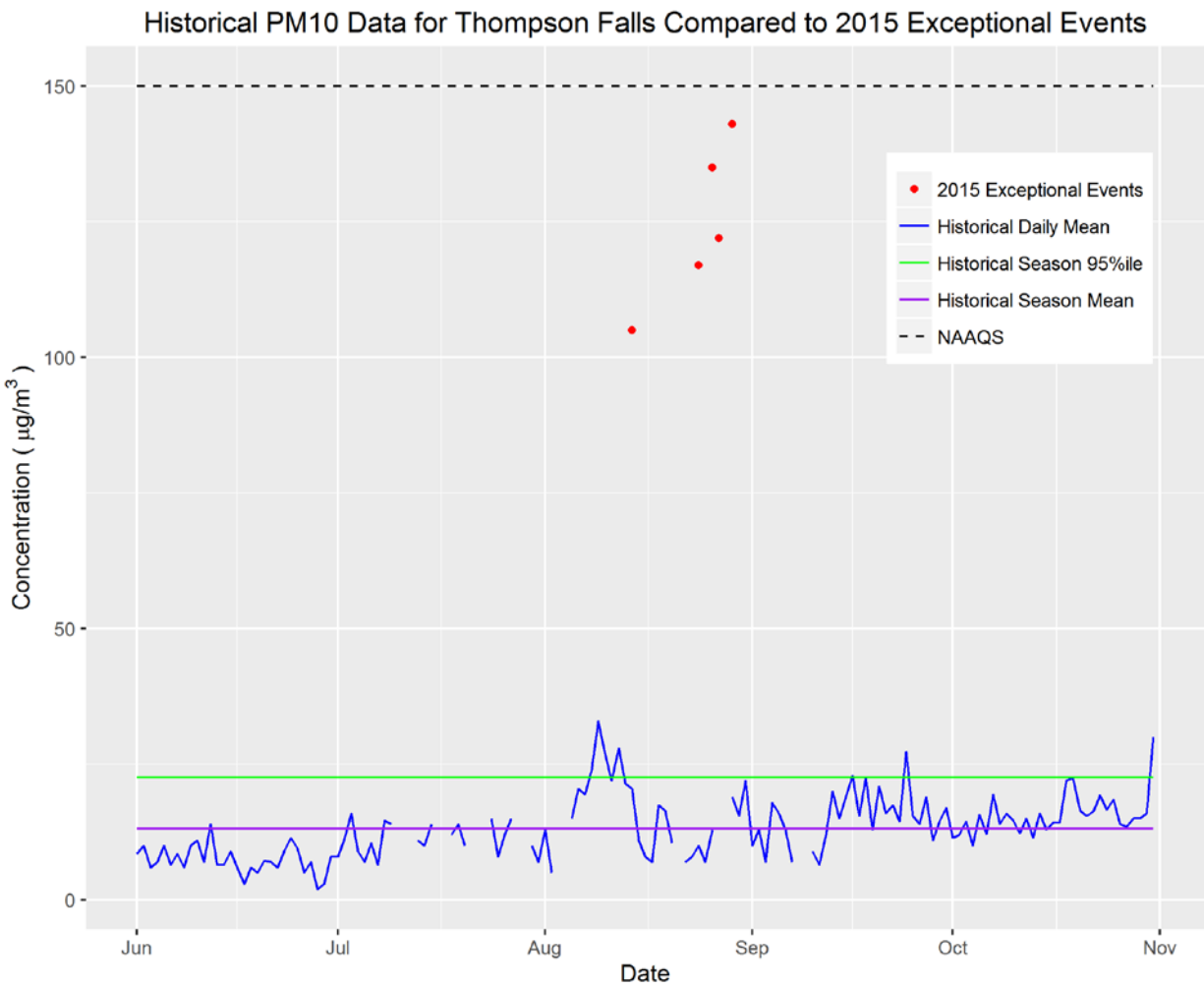
Historical PM10 Data for Missoula Compared to 2015 Exceptional Events



### EXCEPTION EVENTS FOR MISSOULA

Date	Concentration
8/15/2015	133
8/20/2015	101
8/21/2015	116
8/24/2015	104
8/25/2015	120
8/26/2015	104
8/27/2015	119
8/28/2015	181
8/29/2015	276

## Thompson Falls

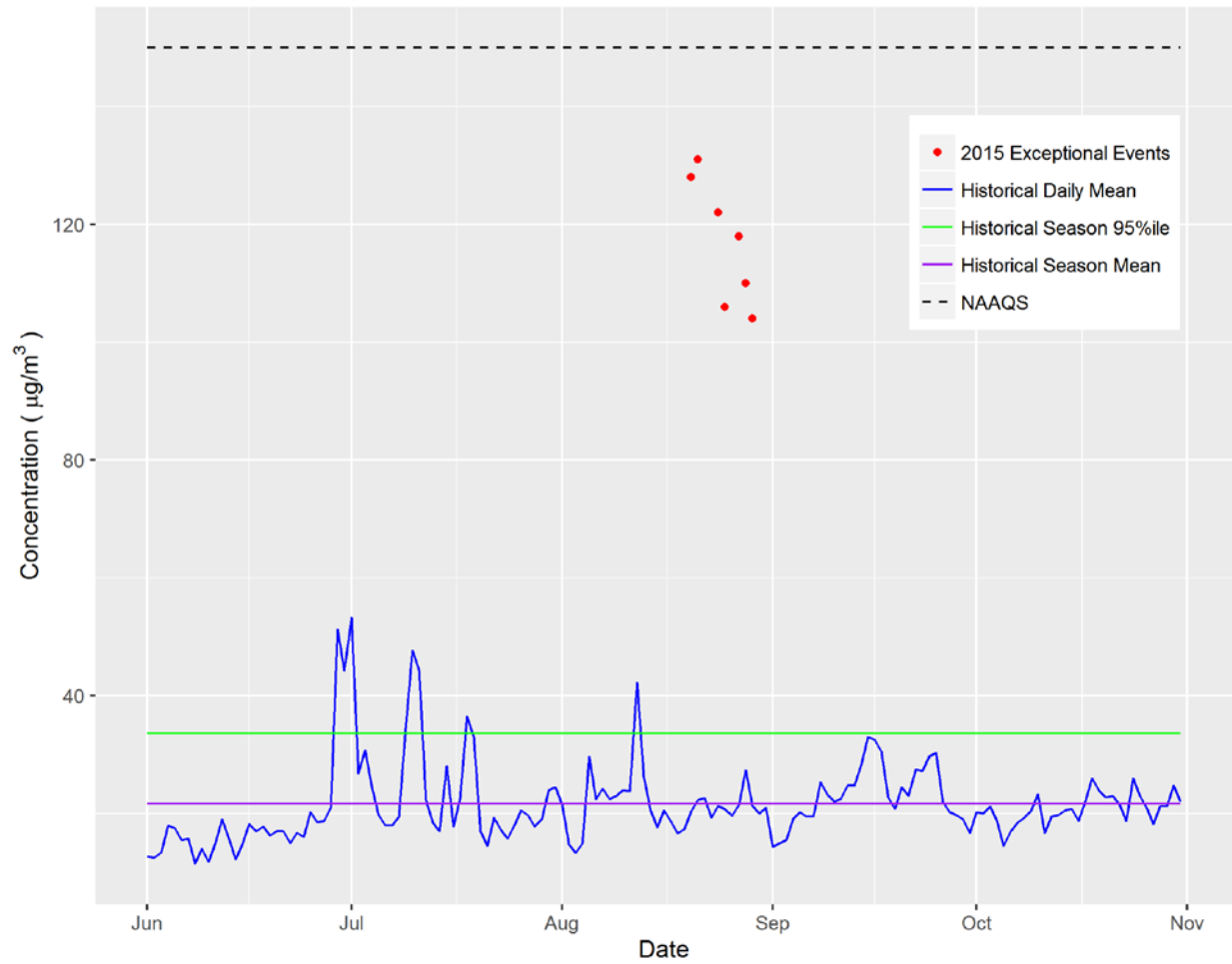


### EXCEPTION EVENTS FOR THOMPSON FALLS

Date	Concentration
8/14/2015	105
8/24/2015	117
8/26/2015	135
8/27/2015	122
8/29/2015	143

## Whitefish

Historical PM10 Data for Whitefish Compared to 2015 Exceptional Events



### EXCEPTION EVENTS FOR WHITEFISH

Date	Concentration
8/20/2015	128
8/21/2015	131
8/24/2015	122
8/25/2015	106
8/27/2015	118
8/28/2015	110
8/29/2015	104



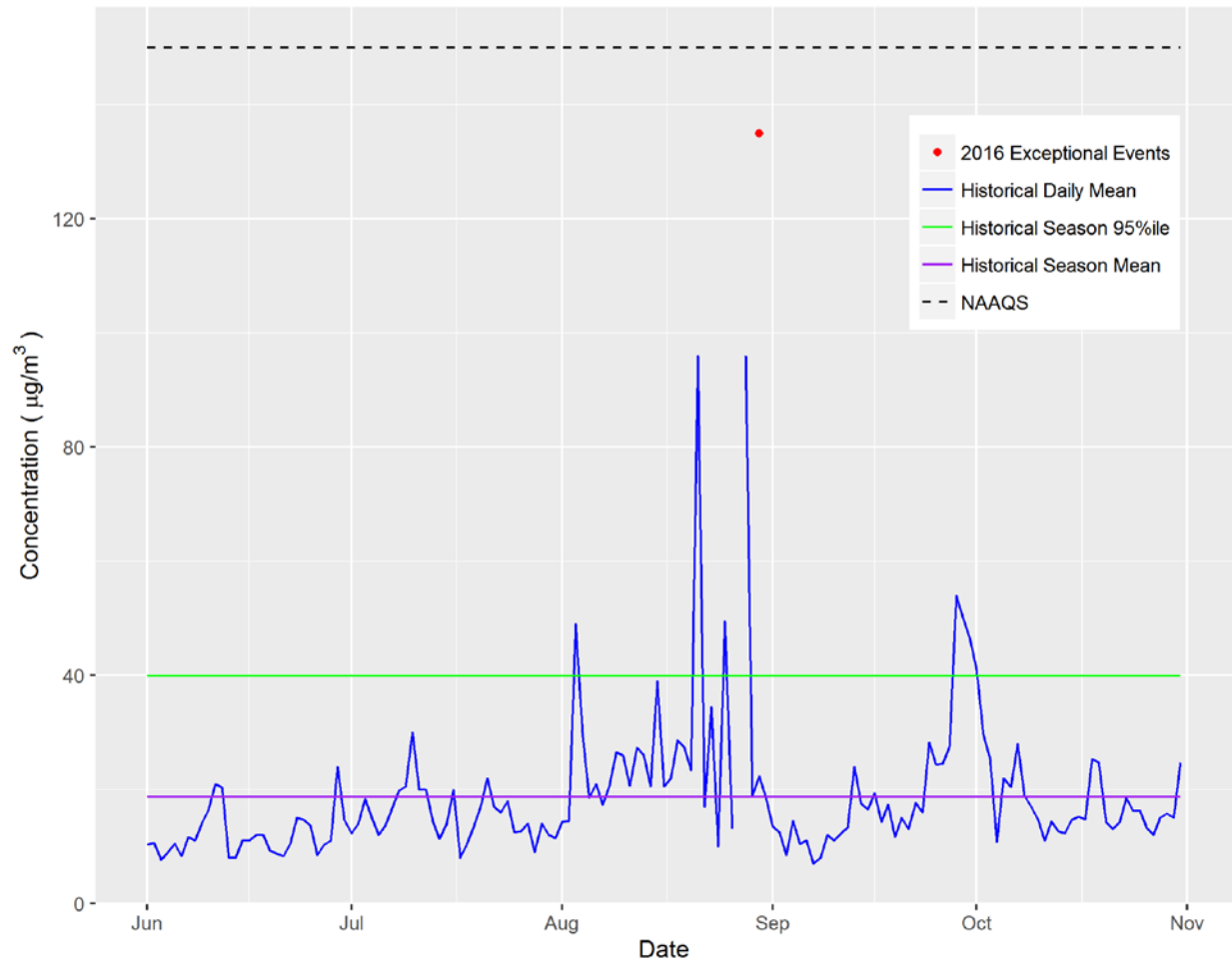
## HISTORICAL GRAPHS FOR 2016 PM<sub>10</sub> EXCEPTIONAL EVENTS

The graphs shown here compare the exceptional events for a monitoring station with the daily average value for that day. This data was created by extracting historical data at each station, removing all null and flagged data, and then developing an average daily value. The daily average and corresponding mean and 95 percentile information is shown for the wildfire season only (June 1 – October 31). The following table outlines the available data for each station.

Station	Years Used for Historical Data	Notes
<b>Thompson Falls</b>	2009 - 2015	Continuous monitor data available since 10/01/2013. Filter based monitor data available 1/1/2009 through 09/25/2013.

## Thompson Falls

Historical PM10 Data for Thompson Falls Compared to 2016 Exceptional Events



### EXCEPTION EVENTS FOR THOMPSON FALLS

Date	Concentration
8/30/2016	135